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ABSTRACT

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CORRESPONDENCE STUDY:

A SUMMARY REVIEW OF THE RESEARCH AND DEVELOPMENT LITERATURE

David E. Mathieson

March 1971

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ERIC CLEARINGHOUSE ON ADULT EDUCATION

ERIC CLEARINGHOUSE ON ADULT EDUCATION

107 RONEY LANE | SYRACUSE, NEW YORK 13210

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MARCH, 1970.

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INTRODUCTION

Correspondence study will be a surprisingly powerful factor in combating the engulfing educational problems of the 1970's. Properly used in conjunction with television and other media, programmed instruction, traditional classroom instruction or residential conferences, correspondence study contributes to instructional systems of great flexibility, effectiveness, and economy.

These are precisely the characteristics needed, if the rigidly overstructured, almost disastrously expensive, present educational arrangements are to be revamped to serve the needs of the "post-industrial" society now and in the future.

Flexibility is essential, since educational needs are both expanding and growing ever more complex. This is true in all parts of the system, but especially in adult education, where better provision for training and retraining are now a stern necessity. We cannot much longer fail to provide large-scale, effective training to help millions of disadvantaged adults into full, creative participation in this very affluent, very privileged society. Nor can we permit whole cadres of highly trained people, victimized by sudden obsolescence, to plunge helplessly into despair, while skilled talent is needed in many other parts of society. These training needs of adults, pyramided on already pressing problems of educating children and youth, present a challenge which simply cannot be met by the present formal education system.

We must welcome the demonstrated willingness of many social institutions and agencies, private as well as public, to bring their talents and resources into the provision of educational opportunities of a variety and scope never before required. Certainly, we must seize for use any educational method which contributes to this purpose.

In addition, we must help learners, children and youth as well as adults, actively to engage in the fun and responsibility of planning and pursuing their own education through many forms of independent study. Their ability and eagerness to do this is nowhere better demonstrated than in the success of millions who have studied and learned through correspondence study.

In these days when even Govenor Rockefeller flinches in the face of dismaying educational costs, when taxpayers across the nation simply refuse to finance any more buildings and universities can no longer afford to wash the windows on their campuses, crisis and necessity are upon us. We must use more effectively many new methods tested in a blaze of educational practice, except in dabbling, token fashion. Among these are many forms where correspondence study plays a key role in integrated instructional systems of great power and economy. I have long regarded the failure of American educators to fully exploit home study, even in its most traditional forms, as one of the inexplicable puzzles of the educational scene. As one of the authors quoted in this report points out, correspondence study comes to the fore when education

is hard pressed and in trouble. This is certainly one of those times.

The purpose of this report is to digest out significant findings from a large body of research and development literature on correspondence study, roughly up to the early 1960's, since this provides a still meaningful foundation for understanding the potential and best use of the method, even though the reports themselves are old and almost entirely inaccessible. A bibliography of more recent studies, with only cursory comment, appears in the last section.

Much of this correspondence study research over the decades focused on validating the effectiveness of the method and, more importantly, on specifying closely its certain limitations and the conditions required for its best use. Much attention was also given to such matters as: (1) developing courses and syllabi; (2) improving feedback between student and instructor; (3) recruitment, motivation and, especially, retention of students; (4) related problems of organizing and administering such learning experiences, including the harrowing problems of quality control.

Is this research and experience no good, because it is old? The author has passed over many items of little consequence and drawn heavily from reports where research or analysis of meaningful experience seem adequately to sustain the findings and insights. Studies from more recent years confirm many of the main points established during this early research period. My observation is that the studies up to about 1960 are large in number and very uneven in quality, but including many excellent, valid research efforts. Those since about 1960 are very few, uniformly adequate in method, some of them redundant of previous research, and, in general, somewhat more elaborate and ambitious. We came upon one dissertation by William H. Ziegel, from George Peabody College for Teachers, previously unknown to us, which is a wonder of statistical rigor and thoroughness, quite unexpected in adult education research of that era. The good quality of recent reports I attribute to the burgeoning graduate training programs where adult educators are now receiving a more sophisticated research background.

Because many of the reports are for all practical purposes, the author has copiously digested out passages which seem to contain the gist of the best reports on each subject. In addition, he has included abstracts of many documents, giving another terse summary. This is what we in the ERIC Clearinghouse on Adult Education have dubbed a "boil out" report, basically a digest of salient material from a large set of documents.

It is also what we call a "sweep report", for it ranges across hundreds of documents, seeking those of particular use and interest. In this we had the help of Robert Wilson of the University of Michigan who struck off the idea when he showed us a list of studies he considered most vital and important in the correspondence field. Our first intention was simply to acquire the documents on his list, prepare abstracts and publish the list. When we realized how unattainable many of these reports were, our purpose shifted to preparing a digest of their content which might serve the need of most users quite as well. Nothing is more exasperating that a bibliography of high sounding reports which cannot be obtained. Mrs. Vaughn and others of ERIC/AE staff

labored for months acquiring most of the documents from Wilson's list and others culled from the monumental bibliography prepared by Gayle Childs for the Correspondence Study Division of the National University Extension Association in 1960. In some cases veteran correspondence educators literally gave us their file copies. Other documents were located from the bibliographies from the recent Carnegie Foundation sponsored study prepared by Ossian MacKenzie and his associates, and from the splendid background papers of that study soon to be published by the Pennsylvania State University Press. Because of this effort, the author has brought a remarkable array of studies under scrutiny. A by-product result is that ERIC/AE has copies of all these studies in its files for anyone who cares to use the Clearinghouse for more intensive study. In the same location is the Syracuse University Library of Continuing Education which has impressive archival materials in the correspondence study area, including some of the working materials of the MacKenzie project.

I observe in the research material we have examined the remarkable contribution of the university correspondence educators both in the past and continuing into the present. We can attribute most of this research and development effort to their instigation. Much of the rest comes from studies in the Armed Forces where correspondence study has been used on a large scale with good results.

The report is arranged by major topics in sections containing a summary digest, often with quotations, of the most salient points made in the research and development literature. References are to the bibliographies, with abstracts, at the end of each section. The final section contains a sizable round-up of important books and reports on correspondence study from recent years with brief commentary. This body of literature needs more intensive analysis in which ERIC/AE would be happy to collaborate.

Please read carefully the note on availability of documents. Many of the older reports are simply not easily avaliable. Those in the final section, however, the more recent documents, are easily obtained from the ERIC Document Reproduction Service or other indicated sources.

Though this report bears little resemblance to the project we first discussed with him, we are grateful to Dr. Robert Wilson of the University of Michigan for advice and the use of his list of key documents.

Roger DeCrow
ERIC Clearinghouse on Adult Education
March, 1971

SECTION I. HISTORICAL BACKGROUNDS

A. History and Philosophy of Correspondence Study to 1960

Although correspondence instruction began later in the United States than in Europe, the needs giving rise to it were basically the same: 1) the traditional classical curriculum found in most institutions of higher learning restricted education to training for entrance into the professions, and 2) the elitist conception of higher education denied higher learning to all but a select few. The adult education movement, the university extension movement, and the correspondence study movement can all be seen as a response to these problems, and an attempt to broaden or break down the restrictions of the traditional curricula and to extend educational opportunities to wider groups at a time when the Industrial Revolution increasingly required more specialized and advanced education and training. The same factors are operating today as we head into the Second Industrial Revolution of automation and cybernation.

Early forerunners. A variety of proto-correspondence study programs existed in the United States between 1865 -1890 which deserves brief mention. The "mother" of American correspondence study was Anna Eliot Ticknor, daughter of a Harvard University professor, who founded and ran the Boston-based Society to Encourage Study at Home from 1873 until her death in 1897. The idea of exchanging letters between teacher and student originated with her and monthly correspondence with guided readings and frequent tests formed a vital part of the organization's personalized instruction. Although the curriculum reflected the "classical orientation", it is interesting that most of her students were women, a clientele then only beginning to demand access to higher education. Although enrollment seriously declined during the Society's final years of operation, this seemed due more to the founder's insistence on working "quietly" and avoiding publicity than to dissatisfaction with the quality of instruction (25:24-25).

The second agency to offer correspondence instruction was an established denominational institution. Illinois Wesleyan University, which in 1874 began offering nonresident courses to prepare students for university examinations. Correspondence instruction could lead not only to Bachelor's degrees but to the M.A. and Ph. D. as well. However the Illinois Wesleyan program apparently failed to convince its critics that its correspondence program was the educational equivalent of its regular program, and faced

with the reality that some institutions of higher learning refused to recognize a degree granted wholly on study done by correspondence, the University Senate of the Methodist Institutions decreed in 1906 that all colleges in the federation had to phase out their correspondence programs in 1910 (13:16-20).

Many educators at the time, however, recognized the need for broadly based nonresident education, and stimulated by the Illinois experiment and more particularly by the Chautaqua movement, banded together in 1883 to form the Correspondence University with its base of operations in Ithaca, New York. The Correspondence University had neither a state charter not the authority to grant degrees. Designed to supplement the work of resident institutions and not to replace them, it soon died primarily because of loose organization (6:14-15).

Harper and the University of Chicago. The real "father" of American correspondence instruction and the person most responsible initially for its acceptance as a method was William Rainey Harper. As a young teacher at Baptist Theological Seminary in Morgan Park, Illinois, Harper was distressed by the inability of some students to take his courses because of the limited facilities available. Such was the demand that the Seminary gave him permission to offer summer courses and when some students were still unable to attend, this led to the idea of correspondence courses in 1881 (25:27). As his reputation grew, Harper's services were sought by other institutions interested in his correspondence experiments. Having already organized a school of languages at Chautauqua (1879), he was instrumental in getting that institution to adopt correspondence study as its method of instruction in 1882 (30:8-10). From Chautauqua, Harper moved to Yale University (1886) as Professor of Semitic Languages, taking the correspondence language school with him (later known as the American Institute for Sacred Literature). When in 1890 he became the first President and organizer of the University of Chicago, he incorporated into its design several features new to university organization including university extension, university press, and university affiliated programs. A key feature of the university extension division was its Correspondence Study Department (later renamed the Home Study Department) which served the public continuously until it closed in 1964. The following extract from Bittner and Mallory's "classic" history of early American Correspondence study gives the flavor of this pioneer department:

> In the University of Chicago Calendar, the purpose of the Correspondence Department was defined as:
>
> 1. to prepare students at a distance for residence work
> 2. to guide those already having resided at the University desiring to pursue their studies further
> 3. to aid grammar and high school teachers and all teachers who have had only a partial college course
> 4. to help instructors in other institutions who desire assistance and advanced study
> 5. to aid ministers and bible students

6. to help college and university students who are compelled by circumstances to reside in the university the shortest time possible
7. to help all wishing to prepare themselves for admission to the University.

All students were matriculated regularly in the University, were admitted to courses if they desired credit,by the regular University Examiner on entrance credits, and might take 18 of the 36 majors demanded for a bachelor's degree through the Correspondence Department. President Harper's plan for Chicago included integration with the residence program whereby as many as possible of the courses given on the campus should be duplicated for the off campus student. Experience shows that nearly every subject can be taught at long range. A comparison of the successive annual announcements of the home study and of the residence departments will show a fairly constant ratio between the offerings of each. The probable demand for a course is a large factor in determining whether or not it will be offered. Other controlling factors are the necessary library and laboratory facilities. These needs are increasingly met by loans.

The first year there were 82 students in the Correspondence Department and 39 courses were offered by 23 instructors. At the time of Dr. Harper's death in 1906, the numbers had grown to 1,587 students, 297 courses, 113 instructors; and in 1929-30 to 6,100 students, 459 courses and 145 instructors.

President Harper said, "Whatever a dead teacher may accomplish in the classroom, he can do nothing by correspondence" -- thus the most alive teachers are a necessity for success -- but also, "if a student is lacking in earnestness, ambition, appreciation, aliveness, he can do nothing by correspondence. Either he will acquire these qualities and succeed, or he will remain as he was in the beginning and fail." ... In addition to the service to off campus students, the Home Study Department is continually assisting those on the campus, 1) by providing a means of completing residence courses necessarily dropped because of illness or calamity, 2) by enabling those whose obligations, financial or domestic, preclude attending certain prescribed or preferred courses, to get them at the proper time instead of waiting perhaps a year, 3) by accomodating those whose program would be disarranged because two desired courses come at the same hour, 4) by affording a means of repeating, along with a reduced residence program, in thoroughgoing fashion a course which in the first instance was not satisfactorily pursued. As an illustration of these services, so far this year, the different deans at the University of Chicago for good and sufficient reasons have given two hundred and three students permission to pursue home study courses concurrently with residence work. During 1928-29, two hundred and forty-eight, who were obliged to drop out of their residence courses before the end of the quarter, finished them under the auspices of our Home Study Department (6:21-24).

Other Universities. Other universities soon followed suit in organizing correspondence study on a permanent basis: Wisconsin (1906), Oregon (1907), Kansas (1909), Minnesota (1909), Nebraska (1909), Texas (1909), Missouri (1910), North Dakota (1910). Three more followed in 1912, and 16 more (including the Division of University Extension of the Massachusetts State Department of Education) by 1919. By 1933, when the Bittner and Mallory volume appeared, 39 NUEA institutions were offering correspondence courses. Of particular historical interest were the programs at Wisconsin and Nebraska (the latter we shall see was the pioneer university in the field of supervised correspondence study).(20:15).

Lighty and the University of Wisconsin. The moving force at Wisconsin was W. H. Lighty (1866-1959). Although correspondence courses had been offered spasmodically since 1891, more formal organization of a Home Study Department did not occur until a report of the state legislature indicated that 35,000 Wisconsin citizens were spending $800,000 annually for correspondence study through proprietary schools which were allegedly enrolling students by exploitive methods. As a result, the University regents recommended an expansion of correspondence services and Lighty was named Head of the Home Study Department (1906). Lighty, like Harper before him, believed that the university could help adults keep up with both technological and cultural change. He saw the university as having a dual role of helping the individual to adjust to change, and of fostering change itself. This ideal not only guided him in organizing the correspondence program but led to his experiments with the use of radio and the idea of organizing classes in factories. His idealism also led to policy and personality differences with a succession of more pragmatic extension deans on such issues as emphasis on cultural vs. vocational curriculum programing (the former was Lighty's model), the method of recruiting students (Lighty felt the Extension Division was slipping into proprietary school methods), credit vs. noncredit, and so on. In addition, Lighty's strict adherence to high standards endeared him to the faculty but not always to the administration. Nontheless, by the time he retired (1937), Wisconsin was noted for the most extensive and advanced correspondence program in the nation(4:56-57;see also 5).

Armed Forces. Correspondence study has been employed as an instructional method in the American armed forces for a much longer time than is generally realized. Although War Secretary Newton Baker made an attempt as early as 1919 to introduce non-officer education into the U. S. Navy, the early history of military correspondence study prior to World War II coincides with the story of the United States Marine Corps Institute. Initiated by Generals J. A. Lejeune and S. D. Butler to alleviate demoralization in the Corps and to recruit higher caliber personnel at the end of World War I, the USMI rapidly developed into a model for the other services (31:37-38). Lt. Col. William Harllee, entrusted with organizing the program, turned to the International Correspondence Schools for aid and materials. The Institute opened its doors on 5 January, 1920 at Quantico, Virginia, offering 14 courses of a vocational nature. After initial opposition from both officers

and enlisted men, the idea became popular enough that the Corps Commandant permitted recruits to enlist for special duty at Quantico where they could undergo instruction after completing their basic training at Parris Island, S. C. A temporary drop in activity at Quantico resulting from Harllee's promotion to Director of the USMC Educational Division was overcome when the Institute was moved to the USMC Washington Barracks (Nov. 1920) where it has been located ever since. Under Harllee's direction it soon became the center for all correspondence education at Marine posts around the world (31:57). By 1938 the Institute's facilities were available not only to the officers and men of the Corps, but also to the Marine Corps Reserve, naval personnel on duty with the Marines, and Marine Corps dependents.

Statistics on enrollment and activity (1921 - 1937 inclusive) show a beginning enrollment of 4500 in 1921, a high enrollment of 8100 in 1926, and a low 1933 enrollment of 4300, rising to 5400 in 1937. By 1938 the curriculum had swung away from purely vocational programming and had expanded into courses assigned to six "schools": academic, Civil Service, commercial, engineering, industrial, and language. The courses offered were idential to those of International Correspondence Schools from which the Institute purchased texts and lessons. Thus, during the period 1920-1940, the USMCI was a correspondence school patterned after and closely associated with International Correspondence Schools.

The enormous influx of men into the USMC during World War II was accompanied by rapid MCI innovations particularly in 1) programs enabling recruits to complete their high school education and 2) the gradual development of the instructional staff. When Col. D. J. Kendall became Director in May 1944, he set and realized for the Institute several major goals: 1) the Institute's dependence on the International Correspondence Schools was gradually reduced; 2) ICS courses were replaced by courses written by qualified Marine instructors; 3) more and better qualified instructional staff were recruited; 4) the curriculum was expanded to offer a wider range of subjects; 5) a college studies program was begun; and 6) accreditation for MCI courses was secured from reliable accrediting agencies including the American Council on Education. With postwar demobilization, Kendall, recognizing the impossibility of securing enough qualified instructors from the Corp's depleted ranks, successfully sought through the Navy Department to have the instructional staff recruited from Civil Service (18:35).

During the period covered by the Cortale thesis (1947 - 1954) the MCI changed its educational mission to what it is at present: "responsibility for providing correspondence type courses that augment technical and military school training to prepare Marine Corps' personnel for advancement in rank, skill, and proficiency. Further, the Institute aids unit commanders in establishing job training and classroom training in certain technical areas designed to increase the overall efficiency of each command in the Marine Corps." (12:3-4). Thus there is less emphasis on academic subjects which are now handled by USAFI. The Institute continues, however, to offer high school subjects,

feeling that "...high school completion is a prerequisite for Marines who must be so acclimated with standard subjects and with good study habits that they can grasp the intricacies of technological development in the military service." (12:4). Cortale's document is, in the main, concerned with the continuing problem of student inactivity (primarily non-completions), and clarifying and strengthening the role of the base education officers who handle the field end of the correspondence instruction process.

The major events in military correspondence education since 1941 have been in connection with the rapid development of the United States Armed Forces Institute. Originally USAFI was a U. S. Army enterprise begun in Washington on 24 December 1941. Response was so favorable that the Army invited civilian assistance and made the facilities available to the Navy. The operation was moved to Madison, Wisconsin, and on 3 February 1943 was redesignated as USAFI. The changed conditions created by the war modified plans to have it operated strictly by the military, with most of the staff recruited from the Civil Service (38:18). In January 1950 USAFI was shifted to full civilian control.

The initial emphasis was placed on high school completion through the General Educational Development program (GED) by two types of offerings: correspondence study from the Institute itself; and correspondence study offered through 75 cooperating schools and universities. This was later broadened to include college courses. Manuals of self-teaching were produced (in cooperation with Indiana University and later with the American Council on Education) and distributed. A battery of tests developed with the help of the University of Chicago (end-of-course exams for USAFI; exams to determine proficiency in specific fields of study; and the GED). Accreditation procedures were worked out in conjunction with the American Council on Education; initially by the development of "A Guide to the Evaluation of Military Experiences in the Armed Forces" (1944) to facilitate the interpretation to the schools of the USAFI courses and since December 1945 The Commission On Accreditation Of Service Experiences Of The American Council On Education (CASE) has served as the agency to assist civilian educators in evaluating achievement.

A table (p. 7) illustrates the magnitude of USAFI operations during World War II (38:124).

Since 1945 three broad trends are discernible in military correspondence education: 1) USAFI continues to emphasize GED programs and general education of military personnel below the college level; 2) other military educational agencies (e.g. the service schools) are now concentrating more on specific training for the achievement of required military skills; and 3) the higher education function has for the most part been farmed out to cooperating institutions of higher education.(11).

UNITED STATES ARMED FORCES INSTITUTE CORRESPONDENCE
ENROLLMENTS AND COLLEGES UTILIZED IN LESSON
SERVICE CUMULATIVE TO SEPTEMBER 30, 1945

Theater of Operations	Agent for Lesson and Test Service	Enrollment
Continental United States	University of Wisconsin, Madison	367,367
Alaska	University of Washington, Seattle	7,754
Antilles	University of Florida, Gainesville	299
Central and South Pacific	University of Hawaii, Honolulu	56,176
European Theater	Battersea Polytechnic Institute, London	85,487
India, Burma	University of Calcutta, India	15,519
Middle East	American University, Cairo	15,026
Mediterranean	University of Rome	27,306
Panama	University of Florida, Gainesville	2,493
Southwest Pacific	Sydney Technological College, Australia later G. I. Faculty, Manila	70,802
	Total	648,227

Private Correspondence Schools. The entry of privately controlled schools into the field of correspondence instruction was a response to a felt need not being met by more formal institutions of learning. The significant literature on proprietary schools continues to be sparse. One can, in general, gather impressions from recent years by reading the Home Study Review (1960 - 1967) but no definitive study of the contemporary situation has emerged since John Noffsinger's Correspondence Schools, Lyceums, Chautauquas (MacMillan 1926). Although there has been a plethora of material concerning the fraudulent schools, there have been few comprehensive studies of the history and contributions of the more reputable schools. This is particularly distressing inasmuch as they have come to play, and will continue to play, an increasing role on the educational and training stage.

Generally credited as being the "father" of American proprietary correspondence education, Thomas J. Foster (1843 - 1936) illustrates both the felt need for newer educational forms and the response to it. The years following the Civil War saw thousands of lives lost in mining accidents, particularly in the anthracite coal mining industry. The Avondale, Pennsylvania disaster of 1869 which took 192 lives awakened Foster to action about such accidents. In 1870 he began publishing the crusading newspaper, The Shenandoah (Pa.) Herald(later The Mining Herald), which devoted much attention to the problems of the industry. His championship of mine-safety legislation in Pennsylvania was influential in the passage of a state law requiring mine foremen to pass state exams and calling for periodic but thorough mine inspection(1885). When it became illegal for a man to be a mine inspector or superintendent unless he had obtained a certificate of competency, those who aspired to those positions vainly sought for the training needed. Recognizing that the best books available on the subject were written for those having several years of formal education and concerned British conditions, Foster began an information program through a question-and-answer column in his newspaper. Its success led him to publish pamphlets on the subject, add tests to the pamphlets, and to correct the examinations submitted.

Foster began operation of the International Correspondence Schools in 1890 as the correspondence department of the Colliery Engineer Company. By the end of 1901, when it formally became ICS, it had served more than 250,000 students. In the same year the International Textbook Company was founded to supply ICS with its materials. During the 1920 ICS played a prominent role in the development of the United States Marine Corps Institute. Since then it has continued to expand its operations both domestically and overseas and by 1965 had served more than 7,000,000 students (9:4-15).

The principal source work for the early history of private correspondence education is the Noffsinger volume, Correspondence Schools, Lyceums, Chautauquas. By 1924 (the date of Noffsinger's data), nearly 2,000,000 persons were enrolled in the proprietary schools. When this group analyzed into

types of enrollment it was found that: 5% were enrolled in the cultural and liberal arts; 40% in technical and vocational other than business; 40% in business; and 15% in personal efficiency courses of one variety or the other (30:14-20). In looking at the kinds of correspondence schools existing in 1924 and noting the total lack of accreditation, regulation, and cooperative effort, Noffsinger found that 80% of them were individually or personally owned. The largest and best schools were owned and controlled by stock companies with substantial capital, adequate staffs and superior courses(30:20-34).

An analysis of the student body of 1924 revealed that: 1) the median age was 26, in a range from 21-34 (leading to the conclusions that there was no overlapping between correspondence schools and the public educational system); 61% had high school educations or beyond (high school 46%, college 14%, graduate school 1%); 2) vocational backgrounds were primarily business (34.4%) and industry (22.9%), giving the appearance that correspondence courses were taken to qualify for better positions in the same occupation; 3) an analysis of the size of the communities from which the enrollees came supported the contention that the most fertile areas for correspondence schools was not in the rural regions where there was little competition and educational facilities were deficient or in the large cities where competition was keen and the public school system offers opportunities, but in communities from 2500 to 100,000 where there was a degree of competition in semi-skilled vocations, but where the community was not large enough economically to provide agencies for this kind of training (30:35-49). Interestingly enough the Rossi and Johnstone report of 40 years later arrived at the same general conclusions.

Supervised Correspondence Study refers technically to the procedure whereby the local high school secures the instructional materials, provides periods in the school day for study, supervises the work of the student, and returns the required written response to the correspondence center for suggestions, corrections, and criticisms (7:1-2). Major factors in the rise of this method were: 1) the rapid expansion of pupils in the high schools due to compulsory attendance laws, and 2) the need of the high schools, especially in the rural areas, to enrich and diversify their curricula to meet the needs of the enlarged pupil population.

Although the method had been used for some time in the British Commonwealth countries, it was first introduced into the United States in 1923 by Sidney C. Mitchell, Superintendent of Schools in Benton Harbor, Michigan. Mitchell, observing that the high school program was largely academic, thought of offering correspondence study to provide vocational training. After consulting with leading educators and winning the cooperation of the American School (a proprietary school in Chicago), his plan went into effect during the summer of 1923.

Interest in the idea spread rapidly, but it ramained for the University of Nebraska to give recognition to the movement on the state level. In the fall of 1929, Professors Platt, Broady, and Reed experimented with the use of correspondence courses in the high school at Crookston, Nebraska. Their work revealed some limitations of correspondence study under these conditions, especially the lack of correspondence courses prepared specifically for use in high schools. The first three courses were made available by the Nebraska Extension Division in 1931-32, and the number increased to 41 in 1933-34, and to 135 in 1948-49. A grant from the Carnegie Foundation (1931-32) added impetus to developments. The American Council on Education gave recognition to the program as early as 1933. National recognition came from Teachers College of Columbia University when it sponsored a conference on supervised correspondence study in 1934. By 1965, 42 NUEA member institutions were offering correspondence courses at the high school level.

Several early theses (e.g. Perry, Swengel, Collings, Morey), the bulk of them coming from Nebraska, illustrate both the needs giving rise to supervised correspondence study and the problems involved.

Perry outlines the problems of the small rural schools:

> Since economic problems have been especially pressing in rural sections, and it is indicated that there is always inequality of wealth between rural and well-populated centers, schools are in such a condition that changes are needed for relieving teachers and supervisors of heavy teaching loads, providing salaries sufficient to allow for progress, securing funds for purchasing better materials and general equipment, and providing in a general way for more adequate improvement of instruction in supervision. It has been further indicated that the curriculum needs to be revised to provide for individualized instruction and to take such measures as are necessary to break loose from the rigid college set-up (32:7-8).

Collins examined the situation in Ohio (1930) and came to the same conclusion although he suggested a tutorial variant of supervised correspondence study (10). Swengel dealt with the role of the supervisor in supervised correspondence study and implied that its use would greatly aid the development of the learning atmosphere of the schools. Morey (1941) and Swengel (1940) went further and suggested supervised correspondence study as a vehicle for establishing adequate pupil guidance and counseling in the rural high school (28 and 40).

One might ask what this has to do with adult education. Two things: 1) supervised correspondence study pointed to some directions in which some pedagogical problems might be alleviated; 2) within supervised correspon-

dence study lay the seeds perhaps of "group correspondence study" and independent study", methods now salient in many parts of adult education.

B. Accreditation and Licensing Problems

The academic community and potential employers must be convinced of the validity of the correspondence study method if the correspondence student is to be sure he is not wasting his time. Some colleges and universities do not allow any credit through correspondence instruction. MacKenzie and CERP examined this problem. Their survey of 44 institutions which accept credit earned through this method shows that 22 allow a student to earn 25% of his degree credit program in this way, 2 allow 12%, and 3 allow up to 50%. Response of individual educators to a CERP questionnaire asking how many credits they would allow through correspondence in a 120 credit bachelor's degree program indicated: 10% would permit more than 30 credits, 30% would permit 16-30 credits, and 30% would permit 15 or less credits (25:108-109).

The most common approach to winning acceptance for the method is, of course, the accreditation procedure which has come to serve several functions: 1) certifying that the institution or program has met certain standards; 2) indicating to the foundations or government grant-giving agencies which programs meet their support requirements; 3) creating a goal for self-improvement of weaker programs and stimulating a general raising of standards among educational institutions; 4) standardizing credits and establishing a basis for credit transfer; and 5) providing a basis for professional certification, licensing or general preparation, and upgrading courses offering such preparation (26:109-110).

The principal theoretical document on correspondence education accreditation is that of Pfnister (33). Pfnister explores how accrediting theory and methodology for correspondence education have to be different from that usually applied to resident instruction. To evaluate job performance, one must know the goal and the extent to which the performance followed the agreed upon procedures. In short, criteria for evaluation purposes involve at least two things: 1) a clear definition of the desired result; and 2) an accurate description of the process by which the result is achieved. Because of the difficulty of assessing the product and determining the factors contributing to that product, accreditation procedures have tended to emphasize the process, the means employed, and the conditions provided.

If evaluation of the product is difficult in residence education, it is even more so in correspondence instruction. Therefore, evaluation in correspondence instruction must of necessity place emphasis on the process - i.e. upon course preparation and design, the procedures followed in maintaining contact with the student, and the means for evaluating student progress (33:25). Criteria for evaluating correspondence instruction must therefore include, among other things, a careful analysis of the format and structure of the materials

produced, the kinds of relationships established between instructor and student, the proportion of students completing the course in relation to the nature of the course, costs, the degree of flexibility involved, the level of demand for performance placed upon the students, and the provisions of supplementary materials. For the most part, these criteria relate to the process rather than the product, the means rather than the end.

The first significant move toward cooperation between and regulation of the proprietary correspondence schools resulted from John Noffsinger's findings published in Correspondence Schools, Lyceums, and Chautauquas (1926). In 1926 Noffsinger and several leaders of the more reputable private schools met and formed the National Home Study Council. This group cooperated with the Federal Trade Commission in attempting to alleviate some of the more pronounced abuses of the fraudulent schools (e.g.30).

In 1952 the National Home Study Council began to research and recommend the kind of criteria applicable to correspondence schools and in 1959 the NHSC Accrediting Commission obtained full accrediting authority from the U. S. Office of Education. The following year it issued its "Documents and Instructions of the Accrediting Commission" (15). The procedure whereby this Accrediting Commission determines the qualifications of a school rests primarily upon four types of evidence: 1) the data submitted by the applying institution in a Self-Evaluation Report; 2) a detailed report submitted by highly qualified subject specialists on the instructional texts, guides, and accompanying examinations and materials provided the home study student; 3) the Examining Committee Report prepared after a visit to the institution by a team of competent specialized examiners; and 4) a survey of the school's reputation and standing among Federal and state agencies such as the Federal Trade Commission, the state education department where the school is domiciled, and a compilation of reports from Better Business Bureaus, and other professional and business organizations. Examining Committee members look for such things as: the positive fulfillment of stated objectives; efficient teaching methods; up-to-dateness of texts; comprehensiveness of course coverage; evidence of sound educational planning based on self-study and practical research; achievement of good results; evidence of progress; professionalism of staff and qualified faculty; educationally sound and businesslike enrollment procedures; effective student services; administrative efficiency; practical and sound record keeping methods; individualized instruction; adequacy of physical plant and equipment; honesty in advertising and promotional materials; and demonstration of a satisfactory period of ethical operation (15).

Regulation of the mass of the private correspondence schools continues to remain a major problem, for state laws remain few in number and lax in enforcement. J. M. Miller was one of the first to try to come to grips with regulation on the state level (27).

Wallace Appelson documents both the kinds of fraud that can occur and the procedures whereby it is handled (3;44-53). He notes these major characteristics of the degree mill as identified by the American Council on Education:

- faculties are untrained and mostly nonexistent;
- the time and effort required to complete the courses is a drastic telescoping of what is usual;
- students enrolled for "degrees" are often unqualified for any program of higher learning;
- catalogue descriptions are those of nonexisting offerings;
- advertisements exaggerate offerings and faculty qualifications and may include promise of well-paying jobs upon graduation that cannot be fulfilled;
- the "campus" is usually a post office box or a single room or loft with no requisite facilities;
- the officers are unethical self-seekers, whose qualifications are no better than their offerings, their degrees often having been obtained from the same or similar institutions (3:48);

The National Home Study Council publishes annually a list of the schools accredited by them and a number of more informal guides have appeared (e.g. 17).

Nonetheless, as of 1969 there were only 138 institutions accredited by the National Home Study Council out of a possible population of perhaps as many as 1000 proprietary schools. This fact plus the effects of the controversy within the National Home Study Council during 1969 - 1970 strongly suggest that what is required is Federal legislation regarding the private correspondence schools not only for the purposes of consumer protection but to stimulate further and more effective cooperation among the proprietary schools that are accredited.

Although National University Extension Association (NUEA) members have been active in the correspondence study movement from its very beginning, the first university program having been established at the University of Chicago in 1892, the first major NUEA development toward establishing standards for correspondence study did not occur until the 1930 NUEA national conference when a committee headed by H. F. Mallory examined the question. The Mallory Committee recommendations were adopted, with modifications, at the next NUEA in 1931 (26).

Shortly thereafter in 1936 the Platt Committee's recommendations on standards for supervised correspondence study were adopted (35:152-157). But it was not until 1955 that NUEA established a Division of Correspondence Study, and a decade later changed it to a Division of Independent Study (19:60-63). During its existence the Division produced an annotated bibliography of correspondence study and a newsletter on the field (1956 - 1963). It
a document on criteria and standards in university correspondence study, but this question has usually been dealt with under the regular college accrediting procedures (8).

C. Characteristics of Correspondence Study Students

Background characteristics of correspondence students may be viewed from the larger perspective of the population engaged in adult education pursuits. The 1961 - 62 Johnstone and Rivera study for the National Opinion Research Center provides the background but specifically excludes the correspondence students from the scope of its investigation (22).

Unquestionably the most comprehensive study of the correspondence study is the National Opinion Research Center study by Rossi and Johnstone for CERP (37). Although estimates for the 1969 correspondence student population in the United States range up to over 5,000,000 (39), the 1961 - 1962 data on which this study is based provide an estimate of roughly 2,000,000 (37:4). The likely reason given for even this minimum figure of involvement in correspondence study was said to be that the more formal educational channels may simply not be available to the potential clientele. This interpretation is based on the finding that adult learners from small to medium communities were more likely to pursue correspondence study than their urban counterparts. "The inverse relationship between city size and involvement being probably a function of a differential supply of resources for the specialized instruction." (37:21). It is also suggested that the correspondence method has a special appeal to these persons because it permits them to avoid the embarrassment of enrolling in formal classes where most students are younger (37:22). Regardless of the accuracy of the figure for the size of the correspondence population, it was found that 9 out of 10 adults who received instruction in 1961 - 1962 did so through methods other than correspondence study (37:4).

The general characteristics of the correspondence study population were:

1) predominantly men;

2) different in age from other adult learners -- 3.2 years younger than the "average participant" and 9.6 years younger than the "average adult" in the U. S. population;

3) formal schooling -- the median years of schooling among adult correspondence students was identical to that for the total sample of adult participants (12.2 years). Participants from the lowest and highest educational brackets use the correspondence method less than those from the middle range of the educational continuum.

4) Income -- the median annual income of the correspondence student, while $470 above that of the U. S. national sample as a whole, was $720 lower than that of the average adult education participant. Correspondence students thus have incomes considerably lower than persons involved in learning pursuits through other methods.

5) Occupation -- there is a heavy concentration in the occupational category of craftsmen and foremen. "Correspondence study...would appear to be differentially suitable to the learning requirements of persons located in different types of occupations."

6) Size of Community -- there is sizeable underrepresentation of correspondence students among participants from large urban centers, and an overrepresentation among those living in small towns, and rural areas. This finding tends to confirm those uncovered by Noffsinger in 1926.

7) People involved in correspondence study were much more likely to seek credit for their studies than persons studying by other methods (50% as opposed to 23%). Although very few adults took courses to complete their secondary education, those who did so were likely to use correspondence study. Over one third of all courses taken for a high school diploma were studied by correspondence, while the comparable figures for courses involving college credit were much lower (37:19).

8) Over half (52%) of all correspondence courses reported were in one vocational field or another. This is a heavy overrepresentation of vocational study, since only 34% of the total courses studied by all methods were of a vocational nature. The overrepresentation was heaviest in subjects and skills used in white-collar vocations.

These findings suggested to Rossi and Johnstone two specific functions for correspondence study as an educational method: 1) providing a channel for occupational training for sectors of the labor force geographically isolated from institutions offering specialized training for adults; and 2) providing an acceptable way for adults to complete secondary school.

From a correspondence study perspective, two significant educational trends were noted: 1) the increasing educational attainment of the general American population, indicating a future population with more learning experience; 2) the trend away from specialization within school and toward preparing new workers for their jobs within the work context, which implies greater future development of educational activities outside the formal educational institutions (37:28). Since high school graduation will continue to be the terminal point for most Americans and because general educational attainment is becoming increasingly an important job prerequisite, there will continue to be a large market for correspondence study (37:34-35).

Johnstone and Rossi see three strategies by which correspondence education may contribute to meeting the nation's educational and training needs:

> First, correspondence schooling needs to be tied into existing institutional structures--school systems, business enterprises,etc.--and offer its services to help meet training needs which are so specialized that the institution in question cannot meet them by developing intramural educational programs of its own. Secondly, correspondence schooling should concentrate on two types of courses: those which would provide opportunities for adults to finish their formal schooling and raise their formal educational attainment to the appropriate competitive level; and provide highly specialized courses for which there would not be enough demand in any one business establishment or local community to make it worthwhile to organize formal classes. Finally, it may be time to examine the techniques of correspondence schooling in relation to the new and coming developments in teaching techniques to see whether the new media of education can be appropriately modified to be employed by correspondence teaching (37:37).

Given this perspective, the sparsity of research on the background of the proprietary correspondent student is noteworthy. In part this has been due to the difficulty of communicating with the student in the field, and in part due to the elusive nature of the nonaccredited private correspondence schools. Kennan's 1940 study appears to be the only one of substance (24).

The situation is somewhat better with respect to the university correspondence student population because recently substantial studies have begun to appear to fill the knowledge gap in this area. Fairbanks' study of the correspondence enrollees in university programs in Oregon is a good example (16). The population sample used in the survey included all groups pursuing correspondence study in the Oregon system including regular high school and college students which Johnstone and Rossi explicitly excluded from the scope of their investigation. As did Johnstone and Rossi, Fairbanks found a substantial number of correspondence students enrolled to obtain degrees or diplomas or credit awarded by the schools. The correspondence program becomes a supplement to the curricula of the schools. This conclusion is supported by the fact that almost half (46%) of the survey sample identified themselves as "students." Furthermore, 90% of all respondents to the questionnaire, who represented a wide spectrum of occupations, said they enrolled primarily for credit, and 60% of the respondents stated specifically they would apply the credit toward a college degree or high school diploma (16:95-96).

Complementing the Johnstone and Rossi data, Fairbanks reports 42% of the college students and 44% of the high school students said they enrolled in a correspondence course because the course was either not otherwise available or could not be fitted into their time schedule. This suggests that the unavailability of certain courses, or the difficulty scheduling courses when needed are major factors influencing students to study by correspon-

dence (16:96). It was also found that although the correspondence students were generally favorable toward the correspondence method of learning, the majority preferred the classroom (16:97). The major conclusions drawn from the study were: 1) the role of correspondence study, as viewed by a majority of the students in the sample, is to provide credit courses required for diplomas and degrees which are not available at the time and place the students need them; 2) suggestions made by current correspondence students for additional courses to be added to the curriculum are so diverse that few courses are suggested by sufficient numbers to justify the cost of their development; 3) the limited extent to which school faculties, particularly college faculties, encourage students to study by correspondence suggests that administrators and teachers should be made more aware of the positive role that correspondence study can play in furthering the education of high school and college students.

BIBLIOGRAPHY OF ITEMS USED IN SECTION I

1. Allen, Chester and Wedemeyer, Charles. EXTENDING TO THE PEOPLE: THE STORY OF CORRESPONDENCE STUDY AT THE UNIVERSITY. University of Wisconsin Extension Division. 1957. 57p.

In celebration of the first fifty years of its Extension Division, the University of Wisconsin published the story of its correspondence study program, which outlined factors affecting its development. A predicted increase of enrollment was attributed to such factors as federal assistance to servicemen and increased acceptance of the correspondence method. Statistics on student achievement showed that correspondence study was as effective as resident classroom instruction. Milestones in the history of the division included the Farmers' Institutes begun in 1885, the organization of the Extension Division in 1960, and the creation of a separate extension staff in 1908. Members of the staff wrote textbooks for correspondence study and tested them in class situations. The wide publicity given the texts was a factor in the tremendous increase in enrollment, with the peak of operation in July 1920 when 33,659 persons were enrolled in vocational courses and 14,989 in academic courses. The creation of class centers throughout the state and cooperation in the USAFI program greatly affected Extension at Wisconsin. Since 1954 there have been steady increases in enrollment in correspondence courses. (ED 016 185, MF $0.65, HC $3.29)

2. AN ANNOTATED BIBLIOGRAPHY OF CORRESPONDENCE STUDY 1897-1960 (PRELIMINARY FORM); National University Extension Association, Division of Correspondence Study. 1960. 223p.

In this retrospective annotated bibliography on correspondence study, 1897 through 1960, about 1000 books, research reports, popular and scholarly articles, conference proceedings, and other documents on correspondence study are cited or abstracted. The major areas of subject matter include vocational and technical education, rural and agricultural extension, university extension, secondary and elementary education, language instruction, educational methods, teacher education, student participation and achievement, comparative education, and issues relating to credentials, academic standards, and the detection and elimination of fraud in commercial correspondence schools.

3. Appelson, Wallace. TERMINATING A FRAUDULENT NEW JERSEY CORRESPONDENCE SCHOOL, Home Study Review, Summer 1962. pp.44-53.

4. Axford, R. W. W. H. LIGHTY - FOUNTAIN OF IDEALISM in Wedemeyer (Editor) Brandenburg Memorial Essays on Correspondence Instruction I, University of Wisconsin Extension Division, Madison. 1963.

5. Axford, R. W. W. H. LIGHTY - ADULT EDUCATION PIONEER. University of Chicago. Ph. D. thesis. 1961.

6. Bittner, W. S. and Mallory, H. F. UNIVERSITY TEACHING BY MAIL. MacMillan Company, New York. 1933. 369p.

   This study, conducted during 1929-31, surveyed correspondence instruction provided by National University Extension Association member institutions. The origins and growth of correspondence teaching, administrative problems and policies, academic standards and practices, and principles of instruction were ascertained through close examination of course outlines, student reports, and other primary source materials. Data were also obtained on student characteristics and background, enrollments, dropout rates, and academic achievement, and on course credits, budgeting and fees, book supply, course offerings and special courses for prisoners. Of the universities surveyed, 25 were conducting courses on the high school level. Extensive course outlines and case histories furnished by professors from several institutions and in several fields tended toward the general conclusion that, given a good student and an interested instructor, methods must vary according to the type of student, the nature of the course and subject, and the habits and objectives of the instructor.

7. Childs, Gayle B. COMPARISON OF SUPERVISED CORRESPONDENCE PUPILS AND CLASSROOM PUPILS IN ACHIEVEMENT. University of Nebraska. Ph. D. Thesis.1949.

   The study sought to measure the achievement of pupils taking work by correspondence through the Extension Division of the University of braska with the achievement of classroom pupils in selected Nebraska high schools. The sample of students was for 1948 - 1949. An achievement and intelligence test was administered to each student to provide the data for statistical comparison. The major findings were that the mean achievement scores of the correspondence pupils were higher than those of the classroom pupils in 11 of 14 selected courses and the average intelligence of pupils who complete correspondence courses tends to be somewhat higher than the same for pupils who complete similar courses in regular classrooms. The data suggests however that correspondence study tends to be highly selective and if this is true it implies that further investigation must be made to determine whether correspondence study is adequately providing for the needs of those pupils who do not already have a strong educational background or who

are not above average in mental ability. Appendixes include all the statistical data on the sample population of students.

8. Childs, Gayle B. et al. CRITERIA AND STANDARDS; NATIONAL UNIVERSITY EXTENSION ASSOCIATION, Division of Correspondence Study. 1962.

9. Clark, R. D. THE ICS STORY: SEVENTY FIVE YEARS OF SERVICE TO THE INDIVIDUAL, TO INDUSTRY, AND TO THE NATION. Home Study Review, Winter, 1965. pp.4-15.

10. Collins, M. Earle. A SURVEY OF INSTRUCTIONAL NEEDS IN SMALL OHIO HIGH SCHOOLS AND AN INSTRUCTIONAL PROGRAM ON THE TUTORIAL PLAN. The Ohio State University. M. A. thesis. 1930.

    The high school tutorial plan adopted by Ohio combines the features of correspondence courses and actual classroom instruction, using the county as the basic unit of organization. Using data obtained from the High School Principals' Annual Reports to the State Department of Education (1928-1929, 1929-30), a determination was made of the number of schools that could profitably use the tutorial plan as a means of reducing instructional costs and at the same time increasing the curricular offerings. Data was then obtained on the schools needing this plan and the number of potential students.

11. CORRESPONDENCE COURSES OFFERED BY COLLEGES AND UNIVERSITIES THROUGH THE UNITED STATES ARMED FORCES INSTITUTE (REVISED EDITION), United States Armed Forces Institute. Madison, Wisconsin. 1965.

    This publication is a compilation of the schedules of the colleges and universities offering correspondence instruction to military personnel through the United States Armed Forces Institute. These courses are available at high school and college levels in both academic and technical areas. Course numbers, course titles, number of lessons, credit, and enrollment fees listed are effective from 28 June 1965 through 30 June 1966. There are indexes by institution, state, and course.

12. Cortale, Michael J. A QUESTIONNAIRE STUDY OF THE EDUCATIONAL SERVICES OF THE MARINE CORPS INSTITUTE. Niagara University, M. A. Thesis. 1954.

The Marine Corps Institute (MCI) as the official correspondence school offers courses in both academic and technical areas designed to increase the Marine's ability to do his job and meet the requirements for high school completion. The structure, methodology, student dropout problem and Institute's attempts to meet the problem are examined. A questionnaire study of the Institute's services and the efforts of the field education officers enabled the latter to suggest program improvements. Factors influencing the dropout rate (87%) were found to be: 1) MCI publications are not received by a number of units; 2) shipping orders, which enable the education officers to contact the enrollees, are being received by only 1/2 of the units surveyed; 3) only 1/3 of the units have follow-up programs, and 3/4 do not present certificates of completion at formations; 4) a number of the units find that the corpsmen are unaware of Institute programming, and course readibility contributes to decreasing student interest and activity; and 5) the education officers are anxious to secure courses in guidance from the Institute in assisting him in aiding the enrollee. Appendices include the questionnaire employed, an MCI organizational chart, and the MCI curriculum offerings.

13. Curtis, E. H. THE HISTORY OF NON-RESIDENT COURSES AT ILLINOIS WESLEYAN. Home Study Review, v6 n4 Winter 1965, pp.16-20.

14. Bulletin of the National Association of Secondary School Principals, v.36 n190. December 1952.

    (This issue is entirely devoted to supervised correspondence study).

15. DOCUMENTS AND INSTRUCTIONS OF THE ACCREDITING COMMISSION. National Home Study Council. Washington, D. C. 1961.

    The National Home Study Council, a voluntary membership organization of private home study schools, has published under one cover the documents and instructions of its Accrediting Commission. The first of nine documents states the objectives and procedures for accreditation by the Council. It explains 1) how a school submits an application for accreditation, goes through a self-evaluation, and submits reports of that evaluation, 2) how the Examining Committee visits the school, gathers additional data, stimulates ideas for improvement wherever possible and makes a factual report to the Accrediting Commission, and 3) how the Accrediting Commission assembles other data from sources such as students, graduates, and governmental agencies, and meets to consider the reports and take action. Other documents included are the application for accreditation, a rating form for examiners and subject specialist reviewers, a guide to self-evaluation, a request for Examining Committee visit, instructions for studies of student progress, a schedule for paying fees,

and the annual report by member schools. Also included are statements of objectives and procedures, standards for accrediting the schools, responsibilities of members of Examining Committees, and how the Accrediting Commission receives and acts upon applications. (ED 016 187, MF $0.65, HC $3.29)

16. Fairbanks, Wight Wesley. A STUDY OF CORRESPONDENCE STUDENTS OF THE OREGON STATE SYSTEM OF HIGHER EDUCATION. University of Oregon. Ph. D. Thesis. 1968.

A survey was made of characteristics of correspondence students of the Oregon State System of Higher Education, reasons for choosing correspondence study, and attitudes toward it. A questionnaire mailed to 3,241 students, and returned by 1,040, asked 26 questions relating to experiences at each state (awareness, interest, evaluation, trial, adoption) in the choice of the correspondence method. Data were analyzed from the seven largest occupational groups represented: teachers, college students, high school students, others studying high school students, others studying high school courses, armed forces students, homemakers, and meteorologists. Findings included the following: 1) the majority felt that the role of correspondence study was to provide diploma and degree courses to which one would otherwise lack access; 2) faculties gave relatively little advice or encouragement concerning correspondence study; 3) the majority of students first learned of the availability of their course, and received the most encouragement to enroll, from such sources as parents, teachers, advisors, and employers; 4) the majority had favorable attitudes toward the correspondence study method.

17. Fleming, Alive M. A COMPLETE GUIDE TO ACCREDITED CORRESPONDENCE SCHOOLS. Doubleday and Company. New York. 1964. Available from Doubleday and Company, Garden City, New York ($1.95).

Schools which have been approved by the Accrediting Commission of the National Home Study Council are listed and described in this guide,which also answers general questions about correspondence study, elementary through college levels. The non-accredited school, industrial training programs (tuition refund plans), college and university correspondence studies, and high school and elementary courses are described. The history and program of the United States Armed Forces Institute includes addresses of participating institutions.

18. Flood, Thomas H. THE UNITED STATES MARINE CORPS INSTITUTE SINCE 1938. George Washington University, M. A. Thesis. 1948.

This thesis reviews the development of the Marine Corps Institute from 1920 to 1938 and then examines in more detail its evolution during the war years 1940 to 1946. The major changes of the latter period includ-

ed: 1) the instigation and development of the high school completion program; 2) the severence of ties with International Correspondence Schools, a private correspondence school, which had supplied previously all the instructional materials; and 3) the expansion of the Institute's instructional staff (including course writers) brought about by the recruitment of better education personnel who had attended college through the GI Bill. Appendices include the courses offered by the Institute and the degrees held by course writers in the Institute's Academic and Science schools.

19. Garvey, Neil F. PROPOSAL FOR THE CREATION OF A DIVISION OF CORRESPONDENCE STUDY. National University Extension Association Proceedings, v38 pp. 60-63. 1955.

20. Hall-Quest, Alfred. THE UNIVERSITY AFIELD. MacMillan Company, New York. 1926.

21. Jessup, Michael. AN HISTORICAL ANALYSIS OF THE DEVELOPMENT OF SELECTED AREAS OF UNIVERSITY EXTENSION PROGRAMS IN THE UNITED STATES 1900-1965 AS RELATED IN THE PROFESSIONAL LITERATURE. George Washington University, Ph. D. Thesis. 1967.

22. Johnstone, John W. and Rivera, Ramon J. VOLUNTEERS FOR LEARNING: A STUDY OF THE EDUCATIONAL PURSUITS OF AMERICAN ADULTS. National Opinion Research Center, Chicago. 1965. Available from Aldine Publishing Co., Chicago, Ill.

Contemporary adult education in the United States today is examined by means of a national sample survey. In this monograph, adult learning is approached from a social-psychological vantage point--the needs, motives, and satisfactions which impel adults to seek to learn some subject. The organization of adult education is considered only insofar as such organization facilitates or hinders individuals in the pursuit of learning. The extent and nature of adult participation in continuing education are reviewed, the people who engage in these pursuits are identified, the situations, circumstances, and personal goals which influence people to become involved in educational endeavors are reconstructed, the national climate of opinion regarding education for adults is looked at, and to a lesser degree, the range of facilities available for the instruction of the adult population is investigated.

23. The Journal of Experimental Education, Fall 1963. (Entire issue devoted to supervised correspondence study).

24. Kennan, Richard Barnes. THE PRIVATE CORRESPONDENCE SCHOOL ENROLLEE. Columbia Teachers College. 1940.

This study is an investigation of a selected group of enrollees in the International Correspondence Schools (ICS) during 1928 and 1932, with respect to stated objectives, factors influencing the selection and persistence in courses, and attitudes towards correspondence study. Data were secured from ICS files, from an enrollee questionnaire, and through interviews. Findings indicate that the main factors influencing selection and persistence were sex and occupation although age seems to be slightly related. The only other significant factors were educational background and extremes in ability. There was a significant relationship between the portion of the courses completed and fees paid. Persons receiving supervision or encouragement were more persistent than those who did not. The ICS policy allowing course changes did not significantly affect persistence. Principal reasons for enrolling in correspondence study included flexibility of study hours, low cost of correspondence study, and the opportunity to pursue courses not offered by local institutions. Reasons for noncompletion included dissatisfaction with the course, change of plans, neglect of study, and financial difficulties. Appendixes include ICS file forms and the questionnaire employed.

25. MacKenzie, Ossian et al. CORRESPONDENCE INSTRUCTION IN THE UNITED STATES. McGraw-Hill Book Company. New York. 1968.

Intended as a definitive study of correspondence in the United States, this book covers its historical development, current practices, quality, fundamental characteristics, and present and possible roles in American education. Types of sponsors (the armed forces, the U. S. Armed Forces Institute, Federal government, private home study schools, universitites and colleges, religious organizations, business and industry, labor unions, and associations) are covered. Flexibility, economy, and other advantages of the method are noted. The authors feel, however, that correspondence instruction is not presently fulfilling its potential; problems in such areas as financing, staffing, public acceptance, and in course planning, administration, and feedback and evaluation, are among the reasons given. The systems approach, greater cooperation among suppliers, specialized teacher training, multimedia instruction, cooperative facilities and research units, uniform accrediting and program standards, and a national examining university are cited as needed innovations, and specific recommendations for implementation are made. Appendixes describe the questionnaire survey and list the participants.

26. Mallory, H. F. REPORT OF COMMITTEE ON CORRESPONDENCE STUDY STANDARDS, National University Extension Association Proceedings, 1931.

The committee recommends that the Association adopt the following principles: 1) all teachers of correspondence courses should be appointed on the same basis as those in residence, 2) instructors should be listed with titles and degrees in official publications, 3) correspondence credits should be clearly distinguishable from class credits on Registrar's records, 4) credit courses should be equal to residence courses in quality and amount of work, 5) each course outline should include explanatory material and, 6) definitive provision should be made for comprehensive revision of courses, 7) the teaching load of instructors should be adjusted to the 16 hour rule, 8) students should be required to give evidence that they are adequately prepared for courses in which they enroll, 9) course prerequisites may not be waived except by regular action of the department head, 10) students should be required to submit lesson reports at proper intervals, 11) examinations should be properly safeguarded, 12) correspondence credit will be accepted up to one half of the total required for the Bachelor's degree, 13) one year of residence work in the institution granting the degree shall be required, 14) organization of correspondence study should include: an active bureau head giving adequate time to teaching and supervision; adequate offices and equipment, including a complete filing system; and annual statistics or reports to the secretary of the NUEA.

27. Miller, John M. A PLAN FOR LICENSING AND CONTROL OF PRIVATE CORRESPONDENCE SCHOOLS. Washington State University. M. A. Thesis. 1940.

A survey of state legislation on private correspondence schools was made as a basis for suggesting changes in Oregon law that would more adequately cope with fraudulent practices. Only six states and three Canadian provinces had such legislation. Although the latter were able to control the activities of proprietary schools domiciled outside the province, the commerce clause of our constitution makes it impossible to do so here. The principal problems in Oregon are that nonresident schools do not require licensing, the public is not aware of fraudulent schools, and there is no agency to inspect and evaluate the courses of these schools. Licensing laws should be more effective; there should be a public information campaign about fraudulent practices; and the State Department of Education should act as a central authority on correspondence schools. Appendixes include the texts of the various State statutes concerning such schools, and examples of the posters and bulletins that could be used in public schools warning of fraud.

28. Morey, Victor P. ACHIEVING AN ADEQUATE GUIDANCE PROGRAM THROUGH THE USE OF SUPERVISED CORRESPONDENCE STUDY. University of Nebraska Extension Division. 1941.

The guidance program of the small high school is inadequate because it is unorganized, too narrow to implement educational guidance; and does

not provide aid to out-of-school youth and adults. Supervised Correspondence Study can assist in overcoming these difficulties by 1) relieving personnel of some class duties to provide time for guidance, 2) by enriching curriculum; 3) by extending the services of the school to the graduate, out-of-school youth, and adults, and 4) by providing the student direct assistance with problems of social and personal adjustment.

29. Noffsinger, John. CORRESPONDENCE SCHOOLS, LYCEUMS, CHAUTAUQUAS. MacMillan Company, New York. 1926.

30. Noffsinger, John (Compiler) ORDERS AND STIPULATIONS TO HOME STUDY SCHOOLS BY THE FEDERAL TRADE COMMISSION 1925-1938, National Home Study Council, Washington, D. C., 1938.

Under the auspices of the Federal Trade Commission, the home study and correspondence school industry held two conferences (1927, 1936) and adopted thirty regulations defining unfair trade practices within the industry, and provided for self-regulation through the establishment of an enforcement committee. The purpose of this volume is to set forth a classified analysis of the 56 Cease and Desist Orders and 116 Stipulations issued by the Federal Trade Commission (1925-1938) against various home study schools under these Trade Practice Rules. A digest of all Orders and Stipulations is included. The unfair trade practices against which these rules are directed include the following: 1) misrepresentation through the making of untrue or deceptive statements concerning the school, the students, instruction, and equipment; 2) false claims about opportunities made available through completion of instruction and false job claims; 3) defamation of competitors; 4) names of the schools; 5) certificates, diplomas, and degrees awarded; 6) faculty qualifications; and 7) alleged operation "not for profit."

31. Pearson, Gaynor. THE UNITED STATES MARINE CORPS INSTITUTE. George Washington University. M. A. Thesis. 1938.

This thesis reviews the general educational situation within the Armed forces and correspondence study and then focuses on the development of the United States Marine Corps Institute (up to 1938). Founded in 1919 as a residential program at Quantico, Virginia, the program expanded in 1920 as a correspondence school with the cooperation of the International Correspondence Schools. Shifted to Washington in 1920, the Institute had, by 1938, become the center of all extramilitary education by correspondence in the U. S. Marine Corps. This institute was the prototype for other military programs of the same nature.

32. Perry, Ralph Waldo. CURRICULUM ENRICHMENT IN SMALL HIGH SCHOOLS THROUGH CORRESPONDENCE STUDY. University of Southern California. M.S. Thesis. 1937.

This study investigated the possibility of enriching the curriculum of small rural high schools through correspondence study (CS) using data obtained from a state project in North Dakota, a questionnaire sent to 79 (59 respondents) small high schools in North Dakota using supervised CS, and an experiment in a small school situation using 13 case studies of individual students. Among the conclusions reached from this data were the following: 1) there is a distinct felt need for CS in small high schools particularly in reference to curriculum enrichment, equalization of educational opportunities, and addition of vocational subjects; 2) courses are available to meet these needs; 3) credits earned by CS are as valuable as those earned in regular classes; 4) iniative, independence and a sense of responsibility is developed in the student; 5) students may progress at their own rate which is particularly advantageous to both slow learners and high ability students; 6) CS cannot replace the regular high schools; and 7) CS individualizes instruction and helps solve problem cases. Appendices include the questionnaire employed.

33. Pfnister, Allan O. THE THEORY OF ACCREDITING AND THE APPLICABILITY TO CORRESPONDENCE EDUCATION (Mimeo 1966, a CERP background paper).

Because the student is not in residence, evaluation or accreditation in Correspondence Study must by necessity place emphasis upon the process (the instructional techniques) rather than the product(the student). Consequently accreditation criteria for Correspondence Study Schools would involve such things as a careful analysis of the format and structure of the materials produced, the kinds of relationships established between the students and instructors, the proportion of students completing a course in relation to the nature of the student and the relation of the course, costs, provision of supplementary materials, the degree of flexibility involved, and the level of demand for performance placed on the students. Correspondence Study is sufficiently different in structure and scope to require special accrediting treatment.

34. The Phi Delta Kappan. v22 n4 December 1939. (Entire issue devoted to supervised correspondence instruction).

35. Platt, Earl et al. REPORT OF THE COMMITTEE ON STANDARDS FOR SUPERVISED CORRESPONDENCE STUDY COURSES. National University Extension Association Proceedings. v19 p152-157. 1936.

It would be to the advantage of all parties concerned if the following problems could be solved immediately: 1) All inferior courses, many of which have caused the discontinuation of supervised correspondence study in scores of high schools, should be excluded in order to safeguard the unusual possibilities of supervised correspondence study. 2) Standardization of principles for local schools through the center which is geographically and politically located to serve a certain area will make many more courses available to local schools. 3) The NUEA should adopt adequate standards for approving courses so that high schools can use correspondence courses from various centers. 4) The services of supervised correspondence study will never be complete until every high school administrator can secure adequate information regarding every good supervised correspondence course. 5) Some method for informing high school administrators with regard to all the services that supervised correspondence study can render should be devised. 6) A well-constructed correspondence course should be capable of being used by many correspondence centers. 7) Duplication of research has occurred and will multiply unless some agency for the coordination of experimentation is established.

36. Powell, Elizabeth. REPORT OF THE CORRESPONDENCE STUDY DIVISION. National University Extension Association Proceedings. v50, p129-131. 1967.

37. Rossi, Peter H. and Johnstone, John W. SOCIAL ASPECTS OF CORRESPONDENCE EDUCATION. National Opinion Research Center, Chicago. 1965. (background paper for CERP).

In the 1962 investigation by the National Opinion Research Center into educational practices of the American adult, correspondence education was found to be an unpopular form of learning, attracting students who are highly motivated to learn and blocked from more attractive alternatives. The typical correspondence student is a young man living in a small community, employed in a skilled or semi-skilled occupation, seeking credentials necessary for occupational advancement. Although used primarily for vocational learning, about eight percent of the correspondence courses reported were taken by persons seeking credit in secondary school subjects. If it is to meet the increasing demand for continuing education beyond the formal school system, correspondence education needs to be tied into existing institutional structures and offer its services to help meet specialized training needs. It should concentrate on two types of courses--those which 1) provide opportunities for adults to finish their formal schooling and raise their educational attainment to the appropriate competitive level, and 2) provide highly specialized courses for which there would not be enough demand in any one community or business to make it worthwhile to organize formal classes. The possibility of adapting new media in education to correspondence teaching should be examined. (This paper was prepared for the Correspondence Education Research Project, Pennsylvania State University).

38. Schwartz, Rudolph. NON-MILITARY EDUCATION IN THE UNITED STATES ARMY AND AIR FORCE 1900-1960. New York University, Ed. D. Thesis. 1963.

Using data from official Army records and other sources, the evolution of Army and Air Force nonmilitary education, 1900-1960, was traced, with emphasis on the period 1948-1960. Nonmilitary Army education, nonexistent before 1866, had received scant attention before 1900. World War I led to the first extensive educational program in the Army, with domestic and overseas activities in literacy, secondary, higher, and vocational education. Community and service organizations lent important help. However, postwar reductions in appropriations had the effect of de-emphasizing education and re-emphasizing drill and garrison life. World War II produced an elaborate literacy program and the college level Army Specialized Training Program, together with off-duty education during and immediately after the war through such sources as foreign universities and the United States Armed Forces Institute. During 1948-60, both the Army and the Air Force made education an adjunct of military life, the aim being to improve morale, reduce boredom and disciplinary problems, facilitate recruitment, provide better trained and educated personnel, and develop a better fighting man.

39. Sivatko, John R. "Correspondence Instruction," in Ebel, Robert (Editor) Encyclopedia of Educational Research (4th Edition). MacMillan, 1969. p213-218. The estimated figure given here is 5,270,913 with roughly 2,000,000 in military programs, 189,282 in university correspondence programs, and the balance in the proprietary schools.

40. Swengel, Marcus L. ROLE OF THE SUPERVISOR IN SUPERVISED CORRESPONDENCE STUDY, University of Nebraska. M. A. Thesis. 1940.

A tentative manual of standards and suggestions as to the proper duties of the supervisor in supervised correspondence study was sent to 83 supervisors, for testing in their schools. A follow-up questionnaire, soliciting criticism of the manual, brought 44 responses with 33 of them usable. The suggestions involved ways in which the supervisor could facilitate student learning through supportive action in the school and ways in which he could aid the correspondence center in meeting the student's needs. All the suggestions were considered in some degree helpful by the respondents. Evidence in the study suggests that there is a great diversity of practice in such supervision and in a third of the cases there was little if any guidance in support of the student. The supervisors were themselves dissatisfied with their performance. Appendixes include the manual and the questionnaire.

SECTION II. ANDRAGOGY IN CORRESPONDENCE STUDY

Basic Principles. In reviewing the correspondence method, Mackenzie (49:143) found that it was flexible, economical, psychologically sound, and instuctionally effective. It is psychologically sound since it aids in regaining confidence and overcoming fear or embarrassment on the part of the enrollee who has a background of failure in the traditional classroom. Rather than jumping to the conclusion, however, that correspondence study is a kind of educational panacea, Mackenzie notes that:

> A much more reasonable conclusion to draw is that under some circumstances correspondence instruction can provide the environment needed to allow a student to meet certain instructional requirements. Correspondence instruction will prove most useful when the supplier 1) is aware of the method's capabilities, 2) determines the requirements for teaching the particular subject which must be met in order to achieve course objectives, and 3) compares correspondence instruction with alternative methods and ascertains that it is the most appropriate method for presenting the course under consideration (49:157).

As with any other educational method so far devised, correspondence instruction has its limitations and shortcomings. Mackenzie and the Correspondence Education Research Project (CERP) of Pennsylvania State University noted five problems widely recognized by correspondence educators: 1) working at a distance; 2) special limitations; 3) dependence upon the written word; 4) physical handicaps such as the lack of library resources and so on; and 5) lack of acceptance of the method. These difficulties account in part for the poor reputation correspondence instruction has among academics and for some of its institutional failures.

With regard to special limitations concerning subject matter, a good rule of thumb to follow according to CERP is: the greater the importance of physical performance in learning the subject, the less useful correspondence instruction will be in teaching it. In courses in which extensive laboratory experimentation is necessary, the correspondence institution must overcome the lack of facilities before being able to offer the course successfully (49:166).

With regard to the correspondence student, some critics argue that not all students are capable of correspondence study. They point out that self-discipline and intelligence are prerequisites to self-help. Those who have difficulty following simple directions cannot be expected to complete a correspondence course by themselves, nor can the student who lacks initiative, motivation and perseverance hope to satisfy the demands of correspondence study. Research

on completion behavior supports this argument.

Leonard Stein (55:161-166) suggests four principles for helping adults learn by mail: 1) the educational objectives sought must be appropriate; 2) the medium must be appropriate for the clientele; 3) the learning experiences prescribed must be appropriate to both the medium and the clientele; and 4) special care must be taken to insure that the planned learning experiences offer sufficient flexibility for an adult audience. Broadly speaking, Stein feels that any educational objective having to do with intellectual analysis and/or acquiring of facts can be achieved by mail; purely manual skills can also be taught by this method although probably with less effectiveness than others. Appreciations, understandings, and attitudes can also be influenced through correspondence study.

In defining the clientele, operationally, four factors require attention: (a) because correspondence study is essentially learning by oneself, the group to be served must have sufficient motivation and clarity of purpose to learn by this method; (b) since a correspondence course depends on reading materials and writing skills, it is crucial that the quantity, content, and difficulty be appropriate; (c) because assignments are planned in advance, the course writer needs a precise picture of the clientele's interests, for there is little opportunity to shift once the course is underway; and (d) counseling or admission procedures must be precise enough to insure that only those who can benefit from the course as planned are permitted to enroll. The principle of the selection of learning experiences depends on a considerable degree of precision in (a) selecting and clarifying objectives and (b) defining the clientele. It has to do with the selection of learning experiences appropriate to objectives, clientele and correspondence medium (55:164-165).

Andragogical techniques should therefore be designed to support and enhance the motivation of the self-learner. CERP recognizes four parts to the instructor's task and describes them as preparation, feedback (guiding the learner), evaluation, and personal attention (49:137). All of the techniques and strategies of the writers consulted on andragogy (Erdos, Holmberg, Sims, Wentworth, Lembcke) relate the role of the instructor and the format of the correspondence course to the fundamental task of motivation building and support.

Role of the Instructor. Holmberg views the four basic tasks of the correspondence instructor within the context of a more general conception of the instructional process. He conceives the student-instructor interaction in correspondence study as a didactic conversation in which the instructor widens the knowledge of his students in concentric circles (45 and 46). He feels that a correspondence course must, by definition, be different from a textbook with questions. Such a course provides actual teaching by itself and thus is a substitute for both a textbook and the exposition of a teacher; if the course is attached to a textbook, the textbook replaces the teacher's

comments only. The material to be taught is divided into fairly small parts, suitable as study units, which are normally sent to the student as his work progresses. The idea behind this division of the material into study units is that the student should be offered a suitable quantity of learning matter at one time (instructional density) so that he can regard each unit as a separate task and can easily survey the material to be learned. Thus the bulk of possibly difficult material does not intimidate or overwhelm him. He is encouraged to learn one unit at a time and to see how the completed units link together.

> The difference between a correspondence course and a textbook in this respect appears clearly when the planning of some efficient correspondence courses is examined. A teacher giving oral instruction does not try to teach his students more at a time of a section of his subject than he expects them to grasp and remember, and the author of a correspondence course has to observe the same principle to make it possible for the students, i.e. his readers, to digest and benefit from what he has written. In some subjects, e.g. languages and others where the teaching aims at providing the students with certain practical attainments, this leads authors to adopt a kind of concentric method. This method is rarely practicable in textbooks, where the division of the material more strictly follows logical lines.
>
> In many correspondence courses the author widens the knowledge of his students as it were in concentric circles. He gives them one little part of the difficult matter at a time. He makes them consolidate their newly acquired knowledge in various ways (on which see below), supports it, bringing in secondary material of an elucidating type, and also checks their knowledge and proficiency before he brings in new difficult teaching (and learning) matter. Thus one body of problems may be dealt with several lessons along wutg various other parts of the subject. This simply means that the author identifies himself with an instructor teaching orally who has to consider the receptivity of his students. (45:16)

The advice typically given in this didactic conversation concerns ways of tackling problems, what to learn more or less carefully, and how to connect items of knowledge discussed in different lessons. Above all, clarity of writing should characterize a correspondence course. An easy style with somewhat colloquial language and without abstract or otherwise difficult expressions makes the course attractive to read and easy to follow. This suitable style can contribute greatly to making a course efficient. Holmberg also points out the importance of another element which is often overlooked in correspondence study - academic advisement of the student.

> Students are often in need of advice concerning further studies, professional requirements and other matters more or less closely connected with their school work. It is felt by many correspondence schools that giving such advice is an important subsidiary task if the school and the tutors are to take the place of ordinary 'oral'

> schools and their teachers. In most cases a correspondence school must organize a special department to deal with the students' requests for information and advice. Although this is hardly a problem concerning what is generally called teaching method, I wish to emphasize the importance of such work, which must naturally be done competently, thoroughly, and amiably. It is, apart from the written contact with the tutors, one of the best means by which a feeling of personal contact between student and school can arise. Experience shows that cooperation based on confidence in the school and its representatives promotes good results both from a generally educational and a purely factual point of view (45:40).

Complicating the instructor's task is the fact that usually he is not the course writer. Of crucial importance therefore is the feedback the instructor gives to the learner. Erdos points out that there is no less demand upon him as a teacher than upon the instructor in regular classroom situations (43:36). In addition, he must overcome the barrier of separation from his students. The teacher is helped in this task if the correspondence instutition assigns a group of students to him whose work he corrects throughout a course. Only in this way can he know them as individuals well enough to provide continuous instruction and constructive feedback.

The role of the instructor is particularly important because of the absence of a classroom peer group which may help to reinforce learning motivation. It follows that the litmus test of a good student-teacher interaction in correspondence study is the degree to which it acts as a positive motivational factor for the student. As Erdos suggests, whether or not the reader of assignments has written the course himself, he must work with it and build his instruction on it. Therefore he should have a complete understanding of its structure and the importance within the total pattern of each lesson unit and assignment. He should be a specialist in the subject; and while the written lessons give the framework and substance of the subject, the instructor is nevertheless responsible for tutoring individual students by his correction and comment on their work. By reading the assignments, he detects individual errors and weaknesses. Merely to cross out or point out errors is insufficient - the instructor must give constructive comments directing the student to the correct information in the lesson material or prescribed textbook, or show the student how to deduce the correct answer from the given information. Erdos specifically notes that:

> Achievement is a powerful stimulus; if the instructor makes the student feel he has gained some success in some phase of his work, he will help sustain interest and incentive to go further. Because initiative and self-reliance are so essential in studying by correspondence, the instructor should encourage the student to develop these qualities by commendation when he has shown initiative and is doing a little more than he was asked to do (43:40).

Moreover, Erdos suggests that the responsibility of the instructor lies not only in aiding the students towards their objectives but also in evaluating the course itself and suggesting desirable modifications:

> Every new course needs testing in the field and most courses have to be revised after about a year of experience. Instructors evaluate assignments to see if they are achieving their objectives, list difficulties arising from unsatisfactory presentation of material, unexpected ambiguities, complaints of students, and they file items which help to evaluate the course. From their close observation of students' reactions, they give constructive comment for its revision so that it meets the needs of the students more satisfactorily. It is always desirable for the writer to test his own course by actually using it, though it may not be possible for him to teach all the students if they are numerous. When several instructors teach the same course, their total experience, combined with an analysis of drop-out figures and examination results, is the basis of evaluation. The instructors, being in direct touch with the students, have theresponsibility of bringing to the attention of the supervisors and director of the correspondence school details of course structure or student progress which require their attention (43:41).

Design of the Course. The major key to the correspondence instructional process apart from the role of the instructor is of course the design of the course itself. CERP recognized five stages of development in the instructional process: (a) planning a course; (b) preparing and presenting the course; (c) providing the student-teacher interaction; (d) feedback through paper correction; and (e) revising the curriculum. We are here concerned with the first two. In planning a correspondence course there are several steps which can be outlined as follows:

1). analyzing the objectives and determining how best they can be reached through the correspondence method;

2) specifying the objectives of the course in terms of desired terminal behavior;

3) specifying what characteristics are expected of students who will take the course and devising a method of determining whether the particular student qualifies;

4) specifying course content based on objectives and student characteristics;

5) establishing criteria for the successful completion of the course (49:128).

The course writer or teacher has several kinds of materials to work with: the correspondence text (few commercial texts are available for use alone

but many can supplement correspondence materials); the syllabus and study guide in which supplementary materials and text are organized into a coherent course. Organization is the course writer's most difficult task. He must determine the proper sequence of the information to be conveyed and of the process by which the student learns and also provide practice or reinforcement to strengthen the student's motivation (49:133-135).

Erdos notes that in writing a correspondence course, the author must understand: the instructional purpose of the course; the level of the student; the student's aim in studying the course; and the precise syllabus content required to fulfill the purpose of the course and enable the student to achieve his goal (43:14-15).

When the required coverage is determined, the writer must plan his method of presentation. He must realize that a correspondence course contains not only the information but teaching - all the processes by which one person assists in the training of others. The first step is to program the course of study - breaking the subject content into easily digested portions and controlling the instructional density, for too much material cannot be assimilated at one time. The course must be programmed to unfold from the known to the unknown so the student can constantly understand as he advances. This idea is very similar to Holmberg's concentric circles mentioned earlier. The choice of sections for dividing the subject matter depends upon several factors: 1) topics within the syllabus which lend themselves to treatment as units can form a basis for division based on subject material; 2) whether the student is a child or adult; and 3) the nature of the subject content.

The introduction to the course is of prime importance in the syllabus because it establishes the ground rules of the learning process, provides advice on how to study, and gives an overview of the course. Erdos points out:

> The adult student likes to know what he can expect a correspondence course to give him in knowledge and skills. The introduction should include a synopsis of the subject content which shows the coverage of the course, and the division into lesson units, and which indicates to the student the areas of knowledge he will cover and the skills he will practice. It should also give him an instrument for planning a study program and measuring progress as he works through the lesson units...the introduction should give all the necessary units and the method of studying and working the assignments (43:17).

Erdos stresses, as does Holmberg, the importance of the style and tone of the introduction. It must establish a rapport between teacher and student and must do this not only for the teacher who is the writer of the course, but also for the teachers who are to read and correct the assignments. The style must be simple and direct, the tone informal and friendly if the instructor

hopes to win the confidence of the students.

Ripley Sims of the United States Armed Forces Institute stresses not only the introduction's importance but suggests that the study notes constitute the heart of the teaching aids in the study guide (42:51-55). The study guide writer must be unmistakably clear with reference to four fundamental questions involved in the development of the course: 1) what are the educational objectives which the course seeks to attain; 2) what are the learning experiences which must be provided to achieve these objectives; 3) what is the best way to organize or systemize these learning experiences to insure achievement of the required goals or objectives; and 4) what are the best types of written exercises to evaluate the degree of success of the students in the achievement of the required goals? (43:8-9).

The standardized USAFI correspondence course format was arrived at after Tucker's 1955 study of user reaction to the USAFI correspondence courses (56). Among his findings were the following:

1) the study guide was considered useful by most students, tended to make them more interested in continuing the course, and helped prepare them for end of course examinations;

2) the written assignments were considered useful and well prepared;

3) almost all students liked the study notes but some felt they should be expanded;

4) visual aids such as illustrations and cartoons were considered useful but some students felt there should be more material of this type;

5) a majority of self-examination questions were found to be very useful and most students suggested that there be more of them, more directly related to the text and to the written assignments;

6) about 1/3 of the students believed more space should be devoted to examples, explanations, and clarification of specific points;

7) while most students felt that the introduction was useful, less educated enrollees tended to rate it more highly;

8) the format was considered attractive and easy to understand, but some felt it was too terse and too brief; and 9) it took about five hours, on the average, to complete a unit of study, but the individual times varied greatly.

The heart of the correspondence course is the lesson unit. Its structure parallels that of the total course for it introduces the subject and either

gives information or directs the student to information sources. It includes study aids and provides exercises which insure student participation. The student's understanding and his ability to apply knowledge and skill gained are measured through assignments returned to the teacher for reading, correction, and comment. Here again Erdos emphasizes that the writer must take great care to move from the known to the unknown and must continually ask the question, "Is the student equipped to understand this term or fact from the ground he has already covered?" (43:20).

The number of lesson units in a course is not fixed, but may fluctuate with the subject area concerned - the final number of lessons and their scope will depend upon the nature and complexity of the course. Knowledge of the subject and teaching experience of the writer constitute the best guide. Each lesson should comprise, however, a unified body of content which the student can complete with satisfaction in a reasonable length of time. The unit should not be so short that it lacks a real sense of achievement nor so long as to evoke weariness and frustration. There must be a natural and even development of ideas and concepts arranged sequentially (53).

Sims feels that the study notes are the principal teaching aides in the study guide. They help the student in a variety of ways to get the most out of the unit. The notes may explain or interpret difficult parts of the lesson, provide information on recent developments in the course subject matter, illustrate problems, and suggest practical methods and problems relevant to the lesson at hand. The notes may use specific textbook pages to direct the student's attention or the subject may be presented in topic or essay form without reference to specific text pages. Like Erdos and Holmberg, Sims recommends that directions to the students be specific and unambiguous so that he knows what is expected of him at all times. The course writer should strive toward sentences of medium length with crystal clarity. Paragraphing should be based upon coherence and unity of thought. Effective writing is often achieved when the course writer keeps an image of the intended student clearly in mind and directs his writing to that student as an individual. This aids in avoiding the temptation to write down to the student - avoiding the kind of writing in which the writer knows what he is saying but the student does not.

If a textbook is used in the course, the content material in the study guide and lessons should parallel the textbook format to facilitate learning but should be so structured that memorization and reproduction of what is memorized gives way to a level of learning whereby the student understands and is able to apply the subject material learned. As aids in this process, the course writer should use illustrations, including line drawings, photographs, maps and charts. In each case the illustrative material must be integrated with the content subject matter to accomplish the purpose intended. Only a minimal or limited knowledge by the student should be assumed, and the examples, explanations, and clarifications given in the guide should be as clear as possible without reliance upon other material aids for the student (53:30).

Erdos feels that illustrations demand from the course writer not only careful selection of illustrative material but detailed directions for their placement within the lesson unit. As often as possible, illustrations should be printed on the page opposite the text they illustrate, or be printed in the text at the point of discussion so that with the lesson open to him, the student can study the related text and illustration without turning the pages. Terms used in the illustrations should be identical to those in the text, no new terms should be added, and nothing should appear in the illustrations which is not essential to the content being taught. Moreover, since a constantly repeated pattern becomes monotonous, the kinds of illustrations should be varied (43:21-22). Holmberg also stresses that it is of considerable importance that the illustration captions be to the point:

> If the author or the editor contents himself with giving the number of the illustration referring to the lesson, he misses an excellent opportunity of hammering important things to the student. Experience shows that there are students who look at the pictures only perfunctorily in connexion with the text they illustrate. Fairly full comments on every illustration where what has been said elsewhere in the lesson is expressed in a new way based on the illustration give valuable repetition and help the student to retain a vivid mental picture of the point in question. Figures, letters, arrows and other markings in the pictures are also valuable study helps, by which a student can avoid unnecessarily abstract learning methods. Sometimes it is profitable to base the whole of a discussion on an illustration. What has been said about drawings and other pictures naturally applies to tables, diagrams and other illustrations as well (45:21).

In general, the study guide content should fill in the gaps in the textbook wherever necessary for the achievement of course objectives. However it should not be used to explore subject matter which is factually unsettled or in a state of formulation, for inaccuracies, biases, and incomplete or misleading explanations confuse the student and defeat his learning efforts. One effective way to insure learning is to distribute the topics to be learned over a number of periods instead of covering all topics at one time. A "how to study" technique can be inherent in the presentation of the subject content. The student can be encouraged to: 1) make a general reading or survey of the main headings and summaries to get an overall picture; 2) ask himself questions the answers to which might be reasonably found in the unit; 3) to read the material in detail in search of the answers to his questions; 4) practice self-recitation as he proceeds to test his understanding of the content; and 5) review as necessary to gain mastery (53). A good blow-by-blow how-to-do-it description of putting together a correspondence course is provided by the series of booklets published by the Massachusetts State Board of Education under the editorship of Robert Wentworth. (See items 57 to 60).

Assignments and Instructor Response. The part of the correspondence course in which the instructor can best understand the needs of the student and pro-

vide constructive feedback are the question assignments and the manner in which the instructor responds to them. Edros emphasizes the potentially diagnostic character of the written questions for both the student and the instructor.

> They (the questions) should graduate in difficulty throughout the course so that the student progresses from the simple to the complex and experiences the variety of problems required by the subject matter. They should be diagnostic so that in answering them the student will reveal to his teacher any lack of understanding. The questions should seek to find out not only what he knows and can do, but also what he does not know and cannot do, so that the teacher learns in each individual case where additional explanation is needed (43:22,24).

There is some debate as to the kinds of questions most suitable for correspondence study. Holmberg, as do most European correspondence educators, feels that too much stress has been made on objective questions. While admitting that these tests are useful in checking factual information and may serve instructional purposes if, after the test, the student receives model solutions with comments, he notes that"...they do not induce the student independently to express his insight into the logical connections. Normally it is required that a student should be able to express himself verbally, and this is where the objective tests are not to the point." (45:22-27).

Sims notes that the assignment questions constitute one of the most difficult parts of the study guide to write, and an otherwise satisfactory study guide may fail because of poorly written questions based on fuzzily conceived objectives. Ideally the writer must create a problem situation which requires the desired knowledge, and must identify the crucial element in the situation so that the resulting question will be direct and concise. In every instance the questions should be carefully devised with both the immediate and the ultimate objectives logically and clearly in mind. Bearing in mind the objectives sought, it is desirable that the written assignment questions present situations where the learner is required to indicate his acquisitions of meanings by drawing inferences, relating items of information, translating statements into his own words, formulating generalizations, and finding illustrations and applications for the principles involved. With the instructional level and purposes clearly in mind, the written assignment questions might be planned in terms of the following types of objectives:

a) to aid the learner in the orderly and systematic acquisition of knowledge. This might be accomplished by including a varied number of questions which cover the important ideas and information presented in the lesson, and by framing the questions so that definite and specific answers are elicited. The questions should stress those aspects of the subject material which contribute most directly to the accomplishment of the objectives of the instruction.

b) To aid the learner in comprehending the content material covered. This might be accomplished by presenting a variety of questions which require the learner to think analytically, critically, and interpretively in the subject area concerned. The questions should include graded levels of difficulty and complexity so that students of varying abilities will be challenged. Also, the questions should be so devised that they provide the learner with opportunity for self-discovery of gaps in knowledge and understanding.

c) To aid the learner in the application of the material covered in the lesson. This might be accomplished by presenting topics or problems to be solved through the application of factual information or general principles gained in the lesson. The questions should require the learner to exercise judgment and to express and defend points of view, wherever appropriate.

d) To aid and encourage the learner in making evaluations in the subject area concerned. This might be accomplished by the use of questions which require the student to analyze, synthesize, and compare factual information presented in the lesson and to suggest or indicate new approaches which might be taken for a more thorough understanding of the material involved. For the superior type student, questions might be included which require investigation of new and unexplored sources of information. (54:21-23).

The recommendations of both Sims and Lembcke with regard to correcting the written assignments of correspondence students stem from their goal of motivating the student toward greater achievement. Sims offers specific suggestions based on the accumulated experiences of instructors at the United States Armed Forces Institute.

1) Review, evaluate and grade each lesson promptly and return it to the student ideally within 24 hours.

2) Write so that your comments are easily distinguishable from the student's work, indicating clearly the connection between the comment and the part of the lesson concerned.

3) Avoid posing too many questions by way of comment. The student needs a positive statement or clarification.

4) Give careful attention and complete answers to the student's questions.

5) Always avoid sarcastic comments and notations. The normal human reaction to sarcasm is usually one of resentment. For the student, it may well mean discontinuance of the course.

6) Praise and commend the student whenever merited. The judicious use of commendatory remarks strengthens the student's self-esteem and self-confidence.

7) Give the superior student some suggestions for further thought. Individuals who are able will welcome that challenge and will go on to make the best of their ability.

8) Close the lesson review with a clear concise summary on the quality of learning in the lesson. The comments and notations throughout the lesson tend to be itemized and somewhat piecemeal. A good summary statement should tie it all together (54:26-27).

Rolf Lembcke notes the importance of applying the fundamentals of learning theory in this phase of correspondence instruction (48:11-21). He sees the final step in the learning process as the application of conceived possibilities of solution in a realistic situation and the judgment or verification of the statement by practical consequences. The student is applying newly acquired knowledge by reasonably established tests which can demonstrate whether he has grasped the instruction. The feedback of the corrected paper is intended to reinforce the student's success. "As the closing of the learning process, an objective and a psychologically sublimated correction as well as a just evaluation of student's papers is decisive." The important tasks of this phase, according to Lembcke, are:

1) to control achievement and progress of work;

2) to analyze mistakes;

3) to examine whether the subject has been understood and whether it has become fully the intellectual property of the student;

4) to eliminate obscurities and doubts by putting accurate questions to the student;

5) to help the student overcome difficulties by giving him methodological hints regarding the learning of the subject, thus stimulating the logical reasoning power, the learning process and the will to work ;

6) to analyze a student's papers in order to improve lessons and tests, thus eliminating mistakes, misprints and imperfectly taught parts;

7) to evaluate and comment on the student's work (48:12).

The correspondence instructor has the duty, if he recognizes that the student has not understood or mastered the whole lesson, of finding out the reason why. To increase motivation of the learner, Lembcke feels it is important to influence attitudes toward the learning process. One of the strongest motivational forces is the desire and need for recognition. By correcting and commenting on the work, instructors can change initial readiness to learn into a delight in learning (48:14-15). The first lessons have to be handled with extreme care if this goal is to be attained. For lasting results, direct motivation is preferred to indirect motivation. Learning oriented motivation satisfies the student's curiosity and desire for knowledge. This type of motivation should precede goal-directed or activity oriented motivation. Learning-oriented motivation can be intensified by suggestions on how to approach a subject, how to discover new problems in the lessons studied, how to benefit by considering the material from another point of view, and how to crystalize insights by practical applications of what is learned (48:20-21).

The andragogies described in the works cited point implicitly to: programmed learning systems by the structured nature of the correspondence course format and the stress on motivating the student; and mixed media learning systems by virtue of recognized deficiencies in correspondence instruction stemming from dependence upon the written word and the physical separation of teacher from student as well as the importance of motivation. And indeed the new areas of innovation in correspondence instruction, as will be described in another section, point in these directions.

BIBLIOGRAPHY OF ITEMS USED IN SECTION II

41. PREPARATION OF COURSES. Clark, Fred R. In Phi Delta Kappan. V22,p212, 215. December 1939. 2p.

A correspondence study course outline should have: 1) a good textbook, well illustrated,or a supply of lecture material, reference readings or a specially written correspondence study textbook; 2) an introduction to the course, with instructionsto the student, all very brief and to the point, and a discussion or summary of the "high lights" of each unit of study; 3) review questions, thought stimulators, and self tests; 4) student responses, such as exercises, problems, projects, themes and papers, to be followed by supervised tests at intervals and by a final examination to terminate the course; and 5) selections and excerpts from the writings of others, where such are available, and some sort of bibliography or reference list.

42. Elkins, C. Alfred. EVALUATION AND IMPROVEMENT OF UNITS IN SUPERVISED CORRESPONDENCE STUDY. University of Nebraska (Department of Educational Administration). 247p. M.A. Thesis. July 1933.

H. C. Morrison's pedagogy of learning is used as the basis for formulating general and specific standards for evaluating courses offered to high school students by the University of Nebraska's correspondence study division and to suggest methodological improvements. In applying the standards developed to science, practical arts and appreciation courses, it was found that the exploratory step of the lessons were usually omitted by the extension teachers writing the courses and that proper use of pre-tests had not been made. In an extension teacher questionnaire, the course writers did not see these weaknesses. A summary of the questionnaires sent to the students showed that the courses seemed to do what the aims of the courses set out to do. However it was found that many students had difficulty getting started with correspondence study. While no general reason was given, a large number of the students and supervisors reported that the university extension division was slow in returning corrected papers and course materials to the student and that a lack of pupil interestwas often the result. An appendix of the extension teacher questionnaire was attached.

43. Erdos, Rene. TEACHING BY CORRESPONDENCE: A UNESCO SOURCE BOOK. London, 1967. Available from Longmans, Green & Co. Ltd., 48 Grosvenor Street, London W 1, England ($4.50) 232p.

This resource book contains practical advice on all aspects of correspondence study, contributed by countries in which correspondence teaching has become an integral adjunct to the regular educational system. Included are discussions of school organization; writing, editing, and correction of studies; cost of production of materials; school equipment; the role of instructors; and the coordination of correspondence teaching with oral, audiovisual, and programmed learning devices. Appendixes include sample lessons in composition, techniques of lesson writing, course introductions, guidance for practical work, course review work, general principles for writers of courses, examples of effective illustrations, corrected correspondence lessons, examples of material sent to newly enrolled students, methods of postal dispatch, population taught by correspondence.

44. A CORRESPONDENCE COURSE IN CAMP TECHNIQUE AND MANAGEMENT. Holden, Norma B. Louisiana State University, Baton Rouge. M.S. Thesis. 97p. 1937.

This thesis presents the design for a correspondence course in camp technique and management showing the relations of current trends in the use of leisure time to camping activities. The aims and objectives of the summer camp and the value of camping experiences are discussed in detail.

45. Holmberg, Borje. ON METHODS OF TEACHING BY CORRESPONDENCE. Home Study Review v2, n1 Winter 1961 (entire issue).

46. Holmberg, Borje. CORRESPONDENCE EDUCATION; Hermods-NKI, Malmo, Sweden. 1967.

Correspondence Education, an expansion and elaboration of On the Methods of Teaching by Correspondence, discusses methodological questions in light of recent developments in the science of education and contains an extensive bibliography including works published up to 1966. The concentric circle theory of correspondence instruction is described. Partial contents include: general characteristics and definitions in the method; subject-matter and correspondence course; the instructor at work; advising students; and supplementary oral instruction.

47. Lee, Bernice. SUGGESTIONS FOR A HANDBOOK ON CONSTRUCTION OF CORRESPONDENCE SYLLABI, Proceedings of the 32nd Annual Meeting, NUEA. New Jersey. 1957.

The course syllabus should be the best, in appearance, construction, and subject matter. It should be typed or mimeographed on good paper and bound. An attractive cover identifying the course and the institution offering it invites investigation of the content. Unless the syllabus demands respect the entire attitude of the student toward the course may be affected.

48. Lembcke, Rolf. HOW TO CORRECT AND COMMENT ON STUDENTS' PAPERS. Home Study Review v7 n1,p11-21 Spring 1966.

49. MacKenzie, Ossian et al. CORRESPONDENCE INSTRUCTION IN THE UNITED STATES. A STUDY OF HOW IT FUNCTIONS, AND WHAT ITS POTENTIAL MAY BE. Available from McGraw-Hill Book Co., 3330 W. 42nd St., New York, N. Y. 10035 ($6.95) 1968.

Intended as a definitive study of correspondence study in the United States, this book covers its historical development, current practices, quality, fundamental characteristics, and present and possible roles in American education. Types of sponsors (the armed forces, the U. S. Armed Forces Institute, Federal government, private home study schools, universities and colleges, religious organizations, business and industry, labor unions, and associations) are covered. Flexibility, economy, and other advantages of the method are noted. The authors feel, however, that correspondence instruction is not presently fulfilling its potential; problems in such areas as financing, staffing, public acceptance, and in course planning, administration, and feedback and evaluation, are among the reasons given. The systems approach, greater cooperation among suppliers, specialized teacher training, multimedia instruction, cooperative facilities and research units, are cited as needed innovations, and specific recommendations for implementation are made. Appendixes describe the questionnaire survey and list the participants.

50. Reinoehl, C. M. STANDARDIZING CORRESPONDENCE INSTRUCTION. Journal of Educational Research . v20,p260-267. November 1929.

This study was based upon 2,382 reports on assignments received from 116 correspondence students who completed their courses and who are teachers. It was made to determine, if possible, some reasonable standards for correspondence instruction for teachers.(Research Studies). Findings: One fifth of the students dropped their courses before completing. Long courses tended to be pursued more rapidly than short ones; 24 assignments made a course of fairly satisfactory length. The quality of work done tended to decrease when the number of months to complete a course was excessive. The quality of the work was affected unfavorably by periods of inactivity. The average number of reports returned by each student monthly was 3.2, with a median number of 6, which indicated a reasonable standard would be from 4 to 6. Conclusions: Teachers enrolling for correspondence courses should schedule their time for study; must not undertake more work than they can do well; should not become discouraged and drop the work before completion; must not crowd their correspondence work excessively; no lapses or inactivity should occur. Intelligent guidance will be aided by properly filling out the instructor's information blank. Time extension should be determined by time and merits. College teachers should be limited in the number of correspondence students assigned to them.

51. R shing, Sammie Janette. A CORRESPONDENCE COURSE IN THE ART OF PRODUCING PAGEANTS. Louisiana State University and Agricultural and Mechanical College, Baton Rouge. M.S. Thesis. 71p. 1937.

    This thesis develops a correspondence course for pageant production which is hoped will be adopted for use through university extension. The chapters are made up of sixteen lesson units dealing with the practical problems of pageant production arranged according to the progressive developments of the steps in such production including: definitions, history, types, values, color, light, costumes, make-up, dance, organization, publicity, cast, setting, rehearsals, and performance. Bibliographies are included.

52. Sims, Ripley. PREPARATION OF USAFI COURSE MATERIALS. NUEA Correspondence Division Newsletter v8 n1, p 51-55 February, 1963.

53. Sims, Ripley (compiler). A GUIDE FOR WRITING THE USAFI CORRESPONDENCE COURSE. United States Armed Forces Institute. Madison, Wisconsin. June, 1960.

54. Sims, Ripley (compiler). GUIDELINES FOR THE COURSE INSTRUCTOR. United States Armed Forces Institute. Madison, Wisconsin. January, 1960.

55. Stein, Leonard. DESIGN OF A CORRESPONDENCE COURSE. Adult Education v10 n3, p161-166. Spring, 1960.

56. Tucker, Anthony C. USEFULNESS OF STUDY GUIDES IN USAFI CORRESPONDENCE COURSES. U. S. Department of Defense, Office of Armed Forces Information and Education. June, 1955.

    This 1955 study was conducted to evaluate the usefulness of United States Armed Forces Institute (USAFI) correspondence study guides and to develop suggestions for improvement. The procedure was to analyze questionnaires returned by 3,002 enrollees who had completed substantial portions of their courses. (Course groups were mathematics, science, English and literature, social studies and psychology, foreign languages, business, and technical, and student characteristics included branch of service, military rank or grade, educational background, age, and reasons for enrolling). The guides proved useful to most students (especially the less educated), helped motivate them to continue the course, and helped them to prepare for the end of course test. The format was judged attractive and easy to read, although

some found it too brief. About a third recommended more examples, explanations, visual aids, and clarification of specific points. Most students found the study notes, questions, exercises, and assignments useful, but some felt that the study notes should be expanded. Despite wide variations, five hours was the average completion time per unit.

57. Wentworth, Robert B. HANDBOOK FOR AUTHORS OF CORRESPONDENCE COURSE STUDY GUIDES. Massachusetts State Board of Education, Boston. June, 1968. Revised from November 1965. 54p. (ED 031 633 MF $0.65, HC $3.29)

    Prepared as an aid for prospective authors of study guides for correspondence study, this handbook provides information about the correspondence student, distinctive characteristics of correspondence courses, selection of textbooks, the structure of the study guide, tips for effective style, and preparation of examinations. The appendix contains sample pages illustrating cover pages, introductions, study notes and discussion materials, and excerpts from lesson reports.

58. Wentworth, Robert B. HOW TO TEACH A CORRESPONDENCE COURSE. Massachusetts State Board of Education, Boston. May, 1969. 44p. (ED 031 632 MF $0.65, HC $3.29)

    A teaching guide for correspondence teachers in the Massachusetts public school system provides information on available tools (teaching manuals, textbooks, study guides, and office supplies); on scheduling, grading, and keeping records; on characteristics of the correspondence student; and on teaching techniques and communication with the student. The appendix includes sample tools with comments, messages, blank forms and sample teaching comments.

59. Wentworth, Robert B. HOW TO STUDY A CORRESPONDENCE COURSE. Massachusetts State Board of Education, Boston. February, 1967. 22p. (ED 031 631 MF $0.65, HC $3.29)

    The guide to correspondence study presents suggestions for good study habits and techniques and for examinations. Discussion of how adults learn is followed by information on necessary equipment, memorization, reading improvement, use of the study guide, submitting lessons, and grading of lessons. The section on final examinations includes discussion of preparation and writing of essays and objective type examinations.

60. Wentworth, Robert B. CORRESPONDENCE COURSE HANDBOOK FOR EDUCATIONAL PERSONNEL IN CORRECTIONAL INSTITUTIONS. Massachusetts Board of Education, Boston. June 1969.

SECTION III. RESEARCH ON ACHIEVEMENT AND COMPLETION BEHAVIOR

A. Studies of Completion Behavior

One of the persistent problem areas in correspondence study is that of student attrition and completion behavior. Until fairly recently, however, little substantial investigation had been done in this area and much remains to be done. Indeed as Childs, Allen and others have noted, research has not been one of correspondence study's fortes. The problem can be divided into three related question areas: 1) what is the typical completion rate?; 2) what factors influence whether or not the correspondence student will pursue the course to completion?; and 3) what can be done to improve the completion rate? This section is a summary of significant findings on the completion problem, primarily based on research done during the period 1951-1970. The table on the next page summarizes the completion rate picture.

In a 1951 study, Fairing and Hughes sought through a questionnaire survey of correspondence dropouts from the program of the University of Florida's General Extension Division to determine the reasons that students gave for noncompletion (71). A return of 248 questionnaires yielded the following results: 120 respondees felt they did not have enough time (32 because of teaching loads and 24 because of job requirements); 64 respondees had change of plans (25 involving educational plans, 25 involving vocational plans); 64 thought the courses were unsatisfactory (26 because the course was too difficult, 15 because of general dissatisfaction; and 41 because of illness (71:11,12,17,19).

In a 1955 follow-up study Hughes sought to isolate more specifically the influence of selected factors on completion rate. He investigated the factors of (a) good study habits, (b) necessity for meeting a deadline, (c) prior college experience, and (d) prior correspondence experience. The study did not point to any obvious difference made by good study habits, but the other variables appeared to make significant differences. Both prior college and/or correspondence study appeared to have a positive impact on completion, although the latter less so. Interestingly enough, the necessity of meeting deadlines, as measured in part by the reasons stated by the students for pursuing correspondence study, appeared to be a major positive influence on completion. The presence of deadlines was usually tied to the student's purpose, especially if the goal was educational credit or some form of certification(79:63-64).

In a 1959 study James and Wedemeyer postulated, after examining reasons given for noncompletion, that goal clarity on the part of the students was a major

TABLE I. PERCENTAGE OF COMPLETIONS IN CORRESPONDENCE STUDY COURSE ENROLLMENTS FOR UNIVERSITY LEVEL STUDENTS (69:9)

Years Reported	Number of Students	Total Enrollments	Percentage of Completions: NUEA Formula*	Not Indicated	Reporter	Institution
1929				.50	Schwin	University of Colorado
1929-1930	1,235			.46	Bittner/Mallory	University of Colorado
1930	30,000			.61	Bittner/Mallory	17 NUEA institutions
1943-1956	10,659	35.6 46.1**			Gravey	University of Illinois
1935 1945	(Highest) (Lowest)	63.7 18.7				
1950-1951	42,068	59.7	73.8		Childs	32 NUEA institutions
1953	2,195	63.8	76.5		Ward	University of Nebraska
1962-1963	2,092	56.6	70.56		Tempest	University of Utah
1963	395		35.7		Scotton/Wecke	University of Illinois
1964	3,035	61.2			Sloan	University of Kentucky
1965	4,046		63.0		Powell	Continuing Education Center/Georgia

*NUEA Formula = National University Extension, Correspondence Division formula, completions/total enrollments - cancellations (no lessons submitted).

** Completions for civilians only.

factor. The authors note that the student's motivation and success in a course frequently depend upon family attitudes and study conditions. Completion rates among high school enrollees appear higher among the lower class than middle class. This may reflect the attitude of social class toward education. When attitudes clearly define student expectations and help shape study habits, obviously the chances for successful correspondence study completion increase. Similarly, among adult students, motivation is related to the individual's attitude toward education and the degree to which these attitudes clarify goals and motivate study. Therefore it is of importance that some kind of counseling or supervision be employed to clarify goals and sustain motivation (80:87-93). Bradt's data from his study of 5000 USAFI correspondence students would also appear to support this conclusion (62:113-119).

Spencer's study of all college credit and unit (non-credit) completion at Pennsylvania State University also directly points to the importance of motivation in successful completion for the data show that men completing both three-credit and two-credit courses used more time to complete courses in which they earned lower grades, and, students who are highly motivated with natural aptitude for courses will complete them in short periods of time and earn satisfactory grades (88:10-24).

Hartsell's study of correspondence dropouts from the University of Tennessee also points to the potency of motivation in completion or non-completion. Success factors were planned objectives, self-discipline, careful and habitual study, use of related materials, neat concise assignments, promptness in submitting assignments, seeking differing viewpoints, and variety in approach. Failure factors included having no objectives, hurried preparation, studying anywhere at any time, the attitude that everything is more important than studying, preparing sloppy assignments, pressure from other business, and holding the view that there is only one way--mine (78:3).

Denver Sloan's questionnaire study of University of Kentucky correspondence dropouts found that four reasons most often given for non-completion were: 1) a job that required too much time and interfered with study; 2) lack of time; 3) taking residence work at the same time, and 4) lost interest, finding correspondence study boring or uninspiring. When the factors contributing to disinterest were explored, it was found that they included: 1) lack of time to complete work; 2) background was inadequate for the course; 3) no instructor contact; 4) too much work required for individual lessons; 5) employment interfered with study; and 6) the instructor required too much detail in answers (87:15).

A more recent study by Pfeiffer and Sabers of correspondence dropouts from the University of Iowa suggests that the attrition problem lies with persuading the student to send in the first lessons and attacking the problem of the non-starts.

> The results of the study seem to indicate that of the reasons hypothesized for student failure to complete correspondence study courses, the most logical explanations are those dealing with the failure of the student to begin submitting lessons. This may result from enrollees' erroneous ideas as to the difficulty of the course, or it could

be that the manuals are (or appear to be) more difficult than they need to be. Which of these is the best explanation cannot be determined from these data, but would require another type of investigation.

Since many students complete a correspondence study course in a semester or less while others take over two years to finish, it was desired to determine the relationship between rate of completion and excellence of work. It was found that there is very little difference between the marks assigned to those students who complete their work early and to those who take more than five months to finish a course.

It had been felt that there was a tendency for superior students to finish their work in less time than other students, and thus the better marks would be assigned to those completing the course early. Balancing this, however, may be the fact that the student who hurries through his work does not do as good a job as he could do if he spent more time on each lesson. (84:1).

Perhaps the most comprehensive study of non-completion factors in recent years is that of Donehower which examines the influence of twelve variables (69:91). Donehower uses a sample of correspondence students from the University of Nevada but excludes those pursuing work through USAFI at that institution. In her good overview of 40 years of research on the completion question she notes that the studies are based on university and college programs, so caution must be exercised in generalizing the findings to the military and proprietary programs. Moreover in cases where a student had more than one course enrollment terminated during the cited period, only the first was used. Her population sample thus consisted of 905 individuals. Using the NUEA formula (the difference between terminations and nonstarts divided by total enrollment), the completion rate of the sample was calculated to be 69.41% (69:28). The hypothesis and the findings included the following:

1. There is a relationship between the lapse of time between the enrollment and the date the student submits the first lesson or unit, and whether the student will complete the course. The ratio of completions to withdrawals declines very definitely as the time lapse increases (69:36). Possible reasons for this lie in the goal clarity of the student and whether he is seeking credits or certification. The longer the period of procrastination on the part of the student, the less likely he is to continue the interest which prompted him to enroll initially. This finding adds weight to those of James and Wedemeyer, and Pfeiffer and Sabers.

2. There is a relationship between the distance the student lives from the correspondence center and whether he completes the course (the probability level lies between the .05 and the .02 levels). Although no specific reason can be pinpointed for this, a possible factor is the profile of the student represented in the different distance zones (69:43-44).

3. The reason the student gives for enrolling in a course has a relationship to his completion of the course. Individuals who enrolled to earn credits toward teacher certification and/or college credit had a completion rate well above average. Motivation, study skills, and lack of direction in the selection of the course in which the student enrolled affect the probability of completion (69:49-50).

4. A relationship exists between the previous educational experience of the student and whether he will complete the course. The more education the greater the probability will be for completion (69:57). Qualities of self-reliance, perseverence, and effective study habits are especially important in correspondence study as the student is on his own to prepare his assignments regularly and carefully. The high completion rates of those who have earned a degree relate to proved ability and a motivational level which prompted continued experience in studying college-level material (69:58).

5. A relationship exists between the age of the student and whether he will complete the course. The older student tends to have more specific goals in mind before enrolling in an expensive course as well as understanding the standards and methods of college level work and the amount of effort involved (69:59-61ff).

6. A relationship exists between the sex of the student and whether he/she will complete the course. The completion percentage of females was 69.90 while that for males was 47.32. The ratio of completions to withdrawals for females is over 2 to 1; for males, the ratio of completions to withdrawals is almost 1 to 1 with the trend slightly in excess for the withdrawals (69:63-64). There are a variety of possible reasons: females may tend to be better organized; females cannot waste the financial investment as they are often dependent for funds either on their own family or their husband; the males may have less time due to their role as the primary wage earner; young men tend also to be less patient and more easily discouraged in situations where they must depend on their own resourcefulness (69:64).

These findings add weight to the importance of motivational level and goal clarity in correspondence completion. Indeed, it seems clear from these studies that one direction in which research ought to be pushed is on the motivational structure of the correspondence student and discovering methods to reinforce motivation toward completion. This problem might be handled through several means: 1) an added emphasis on the counseling and guidance process in correspondence study; 2) extending the idea of supervised correspondence study into the group correspondence concept with appropriate mobile facilities; and 3) redesigning the curriculum methodology to take extra advantage of contemporary learning theory.

One recent example of this third approach is Roy Wilson's experiments at the University of Michigan. Assuming that the use of programming-analog techniques might improve completion behavior in correspondence study, Wilson formulated a "short course" in Psychology with experimental procedures and materials designed

to 1) control instructional density by mailing weekly, 2) provide immediate feedback through "answer guides" with each lesson, 3) encourage recall-review of previous lessons through partially "cued" self-tests, 4) provide voice-contact between the students and the instructor via bi-weekly telephone conferences, and 5) require participation in How-To-Study materials. The control group's procedure was the traditional one, but employed the maximum instructional density. A computer treatment of the data found that the experimental groups did significantly better with respect to: 1) the number of students who actually started (i.e., submitted the first lesson); 2) the number of days between registering and starting; 3) completion rate; 4) the time required to complete the course; 5) the grade achievement in the course; and 6) attitudes toward the experimental procedures and materials (89).

B. Achievement Studies in Correspondence Education

Achievement studies can be divided into two groups by age of the students involved; those involving adult students, and supervised correspondence study where the population is almost entirely high school students. One reason for dividing the studies in this manner is that usually the high school students are pursuing correspondence study under supervision and this introduces a variable not present with the adult students. Most of the studies with adults are from programs offered by colleges and universities (especially in the NUEA institutions). Some research has been done with correspondence students in military programs, but there is virtually no substantial research on the achievement of the proprietary correspondence school population. Moreover, with a few exceptions, the sample populations used are quite small, which presents a problem in generalizing about the achievement of correspondence students. Nevertheless,the research seems clearly to indicate that correspondence students perform just as well as, and in some cases better than, their classroom counterparts both in regular correspondence study and in supervised correspondence instruction with high school students.

One of the first substantial studies to appear was that of Ziegel in 1924 (90). This monumental study is of more than historical importance because 1) it employed statistical analysis for the first time on a comprehensive basis in correspondence study research, 2) the population sample used was a fairly large one, and 3) it examined many variables not examined since. Ziegel's findings can be summarized in several categories.

1. Relationship between the three kinds of education: residence, extension, correspondence.

    a. students who have had both residence and extension study, or residence and correspondence study make higher grades in residence than do those with residence study only, higher grades in extension than do students with extension study only, and higher grades in correspondence study than do students with correspondence study only.

    b. when the grades in the three kinds of study are compared, they are lowest in residence study, medium in extension study, and highest in correspondence study. This relation is true whether we compare the grades of students in general, grades of students with only one type of study, or grades of students with both residence and extension study, both residence and correspondence study, or both extension and correspondence study.

    c. variability is least among residence grades, medium among extension grades, and greatest among correspondence grades.

    d. residence grades are better criteria of either correspondence or extension grades than correspondence or extension grades are of residence grades; and extension grades are better criteria of residence grades than are correspondence grades.

e. students who have had both residence study and extension or correspondence study make slightly higher residence grades than do students of equal advancement with residence study only (90:225-226).

2. Relation of grades to age, and advancement.

   a. age and advancement are both significantly correlated with grades, whether residence, extension, or correspondence,

   b. for both age and advancement this correlation is greatest for residence grades, medium for extension grades, and lowest for correspondence grades.

   c. for both age and advancement the correlation with residence grades is greatest when the students have also had extension or correspondence study.

   d. students having residence study and some form of extension or correspondence study are older and more advanced than students with residence study only.

3. Relation of health to number of studies, grades, and type of study.

   a. health of the individual and number of extension or correspondence courses are negatively correlated - students in poor health complete more hours of credit in extension or correspondence than do those in good health.

   b. health and grades are significantly correlated in all three types of study.

   c. there is a slight tendency on the part of students in poor health to earn credit through extension and/or correspondence study.

4. Relation of mental ability to age, advancement, grades and types of study.

   a. mental ability and age are independent.

   b. mental ability and type of study, as represented by those with both residence and extension or correspondence study, and by those with residence study only, are independent (90:226-227).

5. Factors that account for high grades.

   a. age and advancement are chiefly responsible for the fact that students with both residence and extension or correspondence study make considerably higher grades than do students with residence study only, though the two groups have the same mental ability and the residence group is favored somewhat by better health.

b. age and advancement may account in part for the fact that extension and correspondence are higher than residence grades, but not entirely, since extension and correspondence grades are higher than residence grades for the same students.

c. age is chiefly responsible for the fact that graduates with both residence extension or correspondence make somewhat higher residence grades than graduates with residence study only.

d. "there seems to be an art in making grades" (90:228).

6. Relations involving number of studies, order of enrollment, and grades.

a. extension or correspondence enrollment coming first does not lead to later residence enrollment to any significant extent.

b. those who begin with extension or correspondence study complete much less work in residence than do those who start with residence study.

c. those who begin with extension or correspondence study complete fewer of these studies than do students who begin with residence study.

d. those who begin with extension or correspondence study make lower residence grades than do those who begin with residence study.

e. those who have had both residence and extension or correspondence study complete slightly less work in residence than do those of equal advancement who have had residence study only; hence, extension or correspondence study does not increase residence attendance (90:230).

The studies undertaken during the 1920's and 1930's all point to adult correspondence study achievement being on par with achievement with classroom studies, but with the exception of Ames, the population samples are extremely small and one has to be careful about generalizing from them (aside: interestingly enough, Ames excludes Black students from his study because the University of Florida did not keep registrar's records of them!).

Crump (1928) sought to make a comparative evaluation of achievement in correspondence, extension, and residence work. Paired testing of subjects, however, revealed the differences between the three instructional methods were insignificant and were explainable by the relative class size, student maturity, and attitude (67).

Larson (1929) in his comparison of the three instructional methods found that extension and correspondence students' achievement compared favorably with

resident students. However, variability in achievement was more noticeable among the extension and correspondence students (81).

Schwin (1929) found, at the University of Colorado, that the average grade made in correspondence courses is higher than the average grade in all university courses (85).

Fieg (1932) found that correspondence students performed better than the general resident student and than students having the same course in class with the same instructors, but felt that this superiority may have been due to their maturity, earnestness, and discipline. However, paired experimental groups of correspondence and residence students produced inconclusive results with uncontrollable factors accounting for this (72).

Ames(1932) by comparing the performance of 868 correspondence students with a residence population at the University of Florida, concluded that the achievement pattern was fairly uniform with no appreciable differences in achievement (61).

Emil Larson(1936), using the grades of 56 University of Arizona students who had taken both residence and correspondence work, found that the grades earned by correspondence tend to be slightly higher than those earned by the same students in courses in residence (82:105-109).

Dysinger and Bridgman(1947), using a sample at the University of Wisconsin, found that because of uncontrolled variables, it was possible to conclude only that the achievement of the group completing the correspondence was equivalent to that of the regular residence students (70:387-388).

During the next two decades there was a real sparsity of research about the achievement of the adult correspondence student. What research was done had to do with the effect of specific factors on achievement, using quite small population samples.

DiVesta(1954) conducted an experiment to determine the effect of three different styles of presenting correspondence material (popular style, formal expository, study guide) upon the achievement of a sample of 900 airmen, but found that the differences in achievement and retention were not significant(68:253-255).

Fleece found in the correspondence program at the University of Hawaii (1953-57) that after all written assignments were dropped and the number of supervised examinations were increased from one to three, both the completion rate (49.64% up to 63.0%) and the achievement level increased, the latter slightly so, but did not offer a concrete explanation as to the reasons for the changes (73:16-18).

Donehower tested a large population sample from the University of Nevada correspondence program to determine the influence of various factors on achievement. She found that:

1. the time the student takes to complete a course has no relationship to the student's achievement as determined by the grade he receives (69:51). Donehower felt that a possible reason for this is that achievement is based primarily on the student's ability and application to the problem at hand. The amount of time devoted to the preparation of the assignments cannot be determined by the lapse of time between the enrollment completion dates with any accuracy because the time available for study may vary widely for each student depending on the obligations and responsibilities he has. Concentration, perseverence, and self-reliance tend to be more important considerations than the time lapse (69:53). Students should be advised that the time taken to complete the course has no significant effect on their achievement as reflected in their grades, but the probability of their completing the course is lessened if they do not start and continue regularly to submit their lessons as soon as possible (69:54).

2. a relation does exist between the previous education of the student and the student's achievement as indicated by the grade he receives. A possible explanation for this is that since the University of Nevada offers no courses for graduate credit, college graduates who enroll in the correspondence center must choose courses on the undergraduate level. With their educational background it would seem logical to expect them to achieve higher grades than students with less experience (69:53-55).

3. no relationship exists between age of the student and the student's achievement as indicated by the grade received (69:62).

4. no relationship exists between the sex of the student and the student's achievement as indicated by the grade he receives (69:66).

The same general conclusions about achievement can be cautiously drawn from the research literature on supervised correspondence study, the method where high school students pursue correspondence study under supervised conditions in their own local high school.

Cross(1936), using a sample of the high school students enrolled in supervised correspondence courses prepared by the University of Nebraska, sought to uncover relationships between student academic success and reading and general mental ability. He found 1) no correlation between intelligence and success in improvement, indicating a low ability student was just as likely to benefit as a high ability student, 2) there was a positive correlation between intelligence and final achievement possibly indicating that high student achievement will be greater than low ability student achievement, and 3) results were the same for reading ability (66).

Glock(1937), recognizing the importance of motivation as a factor in achievement, recommended on the basis of a survey of the opinions of correspondence supervisors and instructors that: the student must feel what he is doing is important; attention should be given to the environment in which the student works; adequate personal guidance should be provided; and instructors should be careful to write in the student's language(75).

Hanna(1940), the first researcher directly to examine the comparative achievement of supervised correspondence students and regular classroom students,cautiously concluded, on the basis of a small sample of 31 students, that there was little difference between the test results of the two groups but the ability of the correspondence student was higher than that of the typical high school student (77).

McDowell(1940), seeking to discover the influence of taking supervised correspondence courses on regular classroom achievement, compared the marks of a paired sample of pupils studying supervised correspondence courses with their academic marks and with the marks of matched pupils taking only residence courses. He concluded that there was little evidence suggesting that correspondence study materially assisted motivation or performance in the regular courses, and the pupils engaging in correspondence work did not neglect their regular studies (83).

Haberman(1954), trying to uncover the relationship between completion behavior and achievement, used data gathered from the active files of the University of Nebraska Extension Division on all students enrolled (1951-52) in fifteen selected supervised correspondence courses. He found that although the mean grade earned by students did not significantly correlate statistically with the time required to complete the courses, there appeared a tendency for those who completed in a shorter time to receive a slightly higher grade than those who took a longer time (76).

The "classic" study of comparative achievement of supervised correspondence students and regular classroom students remains that of Childs (1949). (63). The subjects were the students of 5 Nebraska high schools where University of Nebraska supervised correspondence was offered in each of 14 selected subjects. Standardized achievement tests were used to measure achievement, the tests being given to pupils in both correspondence and classroom courses at the completion of the courses they were taking. Other tests were administered to secure background information to be used in comparing correspondence pupils with classroom pupils of approximately the same ability (e.g. Henmon-Nelson Test of Mental Ability for Grades 7-12, Form C). The achievement evaluative instruments used were the cooperative tests prepared under the direction of the American Council of Education. In commercial subjects, the tests used were prepared by the United States Armed Forces Institute and published by the American Council on Education.

The results of this study indicate that the achievement of supervised correspondence students is definitely on a par with regular classroom students. Therefore, students may be registered for instruction by this method with the assurance that their mastery of subject material taken will compare well with the achievement of classroom pupils (63:119). Childs feels that it is not the function of supervised correspondence study to replace classroom instruction, but rather to supplement and enrich the curriculum of the high school, and to aid students in isolated areas or pupils confined to their homes who do not have access to educational facilities.

The study indicates a considerable range in the difference of achievement of classroom and correspondence students, depending upon the subject material. Factors that may account for these differences include: differences in the correspondence courses prepared for different subjects, differences in the work of correspondence instructors who teach the different courses, differences inherent in the subject matter of different subjects, or they may be differences existing only because of the inadequacies of the experimental procedures (63:120-121).

When the students were matched on the factors of I.Q. and age, the achievement of correspondence students exceeded that of classroom pupils by a greater margin than existed when students were matched on the basis of I.Q. and GED scores. Since only those students who completed correspondence courses were tested, Childs feels that this indicates that the students who complete the correspondence courses rank relatively high in the abilities required for success for subjects covered by GED tests. This selectivity of correspondence study is reinforced by the fact that the average intelligence level of students who complete correspondence courses in academic subjects is above the level of the average intelligence of students who complete similar classroom courses (63: 121-122).

Moreover, Childs, one of the great pioneers in the field, has periodically brilliantly summarized the state of research both in correspondence study proper and in supervised correspondence study, and outlined areas of research need (e.g. 64 and 65).

BIBLIOGRAPHY OF ITEMS USED IN SECTION III

61. Ames, Burton Weber. A STUDY OF CORRESPONDENCE INSTRUCTION BASED ON ELEVEN YEARS OF UNIVERSITY EXTENSION AT THE UNIVERSITY OF FLORIDA. University of Florida, M. S. Thesis. 1932.

    Based on correspondence study rules and regulations at the University of Florida, administrative procedures for course preparation, grades earned by 868 correspondence students, and enrollment data (1919-31), the value of correspondence study was compared with that of work done in residence. A literature review assessed reasons for taking correspondence courses (chiefly degree credit, personal advancement, and high school graduation or entrance), subject matter (primarily credit work in history, reading, English and education) in college, high school, and other courses; cost and time factors, and instructors' views on the quality and quantity of work in correspondence study. Student grades, student motivation, and disadvantages of correspondence study as perceived by students were also investigated, along with appropriate uses of the three forms (study method, problem or case method, test form) of the correspondence method. It was concluded that grades by the correspondence and the residential method were fairly uniform, with no appreciable difference in standards. Appendixes contain rules and regulations, sample assignments, student grades and other statistical data, and a bibliography.

62. Bradt, Kenneth H. SERVICEMEN WHO TAKE CORRESPONDENCE COURSES: A RESEARCH REPORT OF THEIR PROBLEMS. Journal of Educational Research, v50,p113-119. October 1956.

    A long-standing problem of USAFI is the high non-completion rate of its students, as seen in the fact that over half of their enrollees never submit a lesson. The research included a sampling of over five thousand students, not yet disenrolled, who were delinquent in their work. A twenty-item four page questionnaire was sent to this group. Final usable returns were received from 79% of the group. Reasons for enrollment were given as 1) general interest (37%), 2) school related reasons (32%), 3) career related reasons (23%). Sixty per cent stated that at the time of enrollment they did not plan to receive high school or college credit for the subject. Reasons for delinquency included: 1) lack of time (50%), 2) change of interests and plans (23%), 3) difficulties with mechanics of studying and lesson completion (19%), 4) problems with the course itself (17%). An overwhelming majority stated that they had learned something from the course. A large number stated that they had achieved their goals short of formal completion. This emphasizes the fact that success for the USAFI student is not always measured in completions.

Many student problems could have been avoided by more effective pre-registration counselling emphasizing a realistic evaluation of available time and a more careful selection of subjects to meet personal needs. Volunteered comments point to general acceptance of the USAFI program.

63. Childs, Gayle B. COMPARISON OF SUPERVISED CORRESPONDENCE STUDY PUPILS AND CLASSROOM PUPILS IN ACHIEVEMENT IN SCHOOL SUBJECTS. University of Nebraska. Ph. D. Thesis. 1949.

The study sought to measure the achievement of pupils taking work by correspondence through the Extension Division of the University of Nebraska with that of classroom pupils in selected Nebraska high schools during 1948-1949. Achievement and intelligence tests were administered to each student. The major findings were that the mean achievement scores of the correspondence pupils were higher than those of the classroom pupils in 11 of 14 selected courses and the average intelligence of pupils who completed correspondence courses tended to be somewhat higher than that of classroom pupils. The data suggested, however, that correspondence study tended to be highly selective and if this was true it implied that further investigation must be made to determine whether correspondence study was adequately providing for the needs of those pupils who did not already have a strong educational background or who were not above average in mental ability.

64. Childs, G. B. WHAT RESEARCH HAS TAUGHT US. Address Given at a Correspondence Study Conference. University of Nebraska. 1955. 21p.

This address summarizes research findings and implications in four specific areas of correspondence study (CS): completion rates and related information, CS student achievement, CS student ability, and CS student attitudes. The National University Extension Association study of completion rates revealed that 73.8% of those who started completed and 59.7% of the enrollees completed. The number of cancellations and drop-outs suggests the need for improvement in counseling and guidance. Evidence from comparative studies on both college and high school levels suggests that CS student grade achievement is higher than those in residential courses. CS students frequently constitute a select group of superior persistence and ability. CS students were generally more favorable toward actual courses than towards CS as a method of instruction.

65. Childs, Gayle B. RSEARCH CONCERNING SUPERVISED CORRESPONDENCE STUDY. Bulletin of the National Association of Secondary School Principals, v36 n190,p7-29. December 1952.

66. Cross, A. J. RELATIVE SUCCESS IN CERTAIN SUPERVISED CORRESPONDENCE COURSES OF PUPILS AT VARIOUS LEVELS OF MENTAL ABILITY AND READING ABILITY. University of Nebraska. Ph. D. Thesis. June 1936.

Using a sample of high school students enrolled in supervised correspondence courses prepared by the University of Nebraska, a study was made to uncover relationships between student academic success and reading and general mental ability. Enrollees were given preliminary tests to determine their reading ability and achievement level. The mental ability of each student was determined by his performance on two group I.Q. tests. A second achievement test was used to determine the student's achievement after he had completed the course. Among the findings were: 1) no correlation was found between intelligence and success in improvement indicating that a low ability student was just as likely to benefit as a high ability student; 2) there was a positive correlation between intelligence and final achievement possibly indicating that high ability student achievement will be greater than low ability student achievement; and 3) the same results hold for reading ability. Not all of the courses examined were capable of promoting significant student improvement but those that do will do so for all ability levels. 48 tables of statistical data and descriptions of the testing instruments are included.

67. Crump, Robert E. CORRESPONDENCE AND CLASS EXTENSION IN OKLAHOMA. Columbia University. Ph. D. Thesis. 1928.

A review of correspondence study in Oklahoma (1909-1928) revealed that the reasons behind the failure of the state university and the state colleges to achieve cooperation in this area were problems with course outlines, teacher inexperience, and the opposition of the university faculty. All the institutions have continued their programs in correspondence and this study is a comparative evaluation of correspondence, class extension, and residence work. Using a course in psychology, groups of students using each instructional method and taught by the same teacher were organized. Each student was given achievement and the Otis Self-Administering Intelligence Test and then data gathered on time spent in study and achievement was statistically analyzed from pairs made from each group based on the Otis scores. The findings were mixed probably explainable by relative class size, student maturity, and attitude, but the general conclusion drawn is that there are insignificant differences between the three instructional methods as far as factual knowledge is concerned. The appendices include data on correspondence and class extension work in Oklahoma.

68. Di Vesta, Francis J. THE EFFECT OF METHODS OF PRESENTATION AND EXAMINING CONDITIONS ON STUDENT ACHIEVEMENT IN A CORRESPONDENCE COURSE. Journal of Applied Psychology v38 n4 p253-255. 1954.

In a study of methods of presenting correspondence courses, it was hypothesized that 1) three styles of presenting materials would result in different achievement and 2) quality control imposed by examining conditions would affect achievement and retention level. Participants were 900 enlisted airmen enrolled in a three-month physical training correspondence course at the Officer Candidate School level. A pretest divided the airmen into six experimental groups of similar composition. The course was given in three styles--with a manual written in a popular style, in a formal expository manner, and with a study guide. In each style grouping, an open book examination was administered to half of the men, while the remainder received a closed book examination. Thirty days later the test was given again. It was found that more men in the open book test groups completed the course, differences in achievement of men in the different styles of course presentation were not significant, and participants taking the open book examination achieved higher scores but had greater loss of retention after 30 days.

69. Donehower, Grace. VARIABLES ASSOCIATED WITH CORRESPONDENCE STUDY ENROLLMENTS AT THE UNIVERSITY OF NEVADA 1963-1965. University of Nevada. M.A. Thesis. 1968. 28p. (ED 016 925, MF $0.65, HC $3.29)

The purpose of this 1963-65 University of Nevada study was to determine if relationships existed between the degree of success in college level courses and such correspondence student variables as age, sex, achievement, completion, withdrawal, reason for enrolling, distance from the correspondence center, previous education, and the time elapsed between enrollment and the submission of the first assignment. The subjects, 410 male and 495 female students ranging in age from 16 to 72 but with over half aged 29 or under, came largely from Nevada. Significant relationships were found between completion rates and the variables of time lapse before submission of the first lesson, distance from the center, previous education, and the reason for enrolling, and between the time required for course completion and the reason for enrolling, but not betweem completion time and distance or between achievement and the variables of age, sex, and course completion time. Findings suggest a need to encourage prompt submission of lessons, give special guidance and moral support to younger, less experienced students and to male students, and review procedures regarding the rate of submitting lessons and the minimum information dissemination.

70. Dysinger, Dale W.; Bridgman, C. S. PERFORMANCE OF CORRESPONDENCE STUDY STUDENTS. Journal of Higher Education. v28, p387-388. 1957.

An instructor at the University of Wisconsin taught an introductory psychology course and prepared a similar correspondence course. Multiple choice questions from the final examination of the correspondence study

course were included on the final examination for the resident course and the examinations were scored on these items. Because of the uncontrolled variables it was possible to conclude only that the achievement of the group completing the correspondence course was equivalent to that of the regular students. Sample: 41 correspondence study, 167 classroom students.

71. Fairing, Robert L.; Hughes, Charles R. AN ANALYSIS OF STUDENTS' REASONS FOR FAILING TO COMPLETE CORRESPONDENCE STUDY. Correspondence Study Department, General Extension Division, University of Florida (Gainsville), 1950.

A questionnaire sent to 380 correspondence study dropouts (245 usable responses) revealed that the major reasons for the students not completing the correspondence courses after enrolling, paying, and starting were: not enough time (120); change of plan (64); course unsatisfactory (64); illness (41); course completed in residence (33); course not needed (21); and others (7). Reasons for not enough time were primarily teaching duties, job requirements, and home responsibilities. Reasons for finding the course unsatisfactory were primarily that they were too difficult or general dissatisfaction.

72. Feig, Chester A. THE EFFECTIVENESS OF CORRESPONDENCE STUDY. Pennsylvania State University. Ed. D. Thesis. August 1932.

The comparative effectiveness of correspondence study (CS) and residence work was tested by evaluating the attitudes of universities, state departments of education, and correspondence students, and by comparative academic achievement and control groups. Although 20 education departments felt CS inferior, 34 of 38 accept such work towards teacher certification. 30 have either no CS regulations or follow a liberal policy toward accreditation and the number of CS credits acceptable for teacher certification. Colleges hold Cs to be equally effective and 11 of 36 institutions permit up to 25% of the graduation requirement while 12 permit up to 50%. CS students were overwhelmingly favorable to CS the chief reason being time and individual motivation. The major problem was the lack of student-teacher contact. A comparison of academic achievement showed greater CS to perform better than the general resident student, than students having the same course in class, and with the same instructors. This superiority may be from their maturity, earnestness, and discipline. Control group experiments (CS and resident students paired on the basis of teaching experience and aptitude) produced inconclusive results with uncontrollable factors accounting for this.

73. Fleece, Jeffrey. EFFECTS OF REDUCTION OF WRITTEN ASSIGNMENTS ON COMPLETIONS AND ACHIEVEMENT IN CORRESPONDENCE STUDY. NUEA Correspondence Study Division Newsletter No. 2. March 1957. p16-18.

74. Freeman, Paul Millard. A PLAN TO EVALUATE THE EFFECTIVENESS OF THE FIELD OFFICER CORRESPONDENCE COURSES OF AIR UNIVERSITY. Columbia University. Ed.D. Thesis. 1953.

After reviewing U.S. Air Force education and the resident and correspondence courses offered by Air University, a plan is presented for evaluating the effectiveness of the correspondence courses in terms of achievement of twelve types of individual and interactive behaviors deemed suitable for officers. It is recommended that the Educational Testing Service develop instruments to measure the presence of these behaviors and analyze the data after the tests have been administered by the Human Resources Research Institute of Air University. It is hypothesized that: 1) resident and correspondence groups would excel non-school groups in achieving 11 of the 12 objectives; 2) the relative degree to which the former two groups would excel in a given behavior would be related to the relevance of the criterion activity involved in learning in the subject areas, and to student motivation; and 3) the residence group would excel the correspondence group in the interactive behaviors while the reverse would be true in the case of the individual behaviors. Appendices include correspondence courses offered, the course objectives, and periods of instruction.

75. Glock, Herbert C. MOTIVATION OF SUPERVISED CORRESPONDENCE STUDY. University of Nebraska. M. A. Thesis. August 1937.

A survey was made to determine what may be done by the supervisors and the correspondence instructors through correspondence study to help high school students who are taking correspondence work. Questionnaires were sent to every supervisor (691 of 800 responded) and correspondence instructor (66 of 100 responded) utilizing courses prepared at the University of Nebraska. Examination of the questionnaires indicated how the respondents saw the students' needs. The supervisors saw the needs to include: 1) the student must feel what he is doing to be important; 2) pupil-supervisor conferences were desirable; 3) attention should be given to the environment in which the student works; and 4) adequate personal guidance should be provided. The Correspondence instructors felt that: 1) graded papers should be returned promptly; 2) units of work should be kept up to date; 3) comments should be made on the papers whenever called for; 4) the pupils' study methods should be examined; 5) supplementary materials should be employed as motivation; and 6) instructors should take care to write in the student's language. Appendices include the questionnaires employed.

76. Haberman, Don. COMPLETION RATES AND ACHIEVEMENT OF STUDENTS IN SUPERVISED CORRESPONDENCE STUDY. University of Nebraska. M. Ed. Thesis. July 1954.

Using data gathered from the active files of the University of Nebraska Extension Division on all students enrolled (1951-52) in fifteen selected supervised correspondence courses, the completion rate was found to be 72.95%. The gross completion rate (including cancallations) was 65.13% as compared to the 1941-43 gross completion rate of 58.01%. Moreover as 12% more students began their work than in 1941-43, the measures taken during that period to encourage students to begin work were considered effective. It was further found that a significantly greater number of students required 2-6 months to complete their course than those which required more or less than that amount of time. Although the meangrade earned by students did not significantly correlate statistically with the time required to complete the course, there appeared a tendency for those who completed in a shorter time to receive a slightly higher grade than those who took a longer time.

77. Hanna, Lawrence N. ACHIEVEMENT OF HIGH SCHOOL STUDENTS IN SUPERVISED CORRESPONDENCE STUDY. University of Nebraska (Lincoln). M.A. Thesis. June 1940.

A study was made of the educational achievement of high school students enrolled in supervised correspondence study through the University of Nebraska and the Correspondence Study Center at Missoula, Montana. Data were obtained through standardized tests administered in the local schools, ratings given by the local school staff personnel, and the student grades obtained from the two correspondence centers. A comparison of the achievements of the corresponding students with that of achievement in the classroom course was attempted. Due to the smallness of the sample (31 Ss), only very tentative and cautious conclusions could be offered. Among them were: There was little difference between the test results of correspondence and classroom students; high achievement on the tests was correlated to high grades at the correspondence centers; high grades at the Nebraska center correlated with high ratings by the local school personnel; and the ability of the correspondence student was found to be higher than that of the typical high school student. The author recommends further research on the subject using a much larger sample. Eight tales of data on student performance are included.

78. Hartsell, Charles. CORRESPONDENCE DROP-OUTS. WHY? (Unpublished paper) 1964.

A questionnaire sent to nonstart correspondence students at the University of Tennessee (32% responded) revealed that the major reasons for disinterest were the lack of enough study time and length and difficulty of the assignments.

79. Hughes, Charles R. THE INFLUENCE OF SOME SELECTED FACTORS UPON COMPLETION OF CORRESPONDENCE STUDY COURSES. University of Florida. D. Ed. Thesis. 1955.

A Correspondence Study Inventory of study habits constructed by the author was sent to a sample of 441 pupils (249 returned) taking correspondence courses in the Florida Extension System to obtain data on how selected factors (study habits, purpose for taking the course, time deadline for completion, prior college experience, prior correspondence study experience) affected the correspondence study completion rate. While the study habits of correspondence students accorded well with those suggested by educational psychologists, the study did not point out obvious differences in the practices followed by successful and unsuccessful students. The effect of purpose varied with the specific purpose: those who wished teacher certification had a 79.5% completion rate; those seeking college credit for degree purposes had a 62.2% completion rate; those seeking general vocational-professional improvement had a 55.1% completion rate. The necessity for meeting a deadline, prior college experience, prior correspondence study experience all had a statistically significant positive effect on the completion rates. Appendices include the Inventory of Study Habits employed in the study.

80. James, Bernard; Wedemeyer, Charles A. COMPLETION OF UNIVERSITY CORRESPONDENCE COURSES BY ADULTS. Journal of Higher Education v30 n2 p87-93. February 1959.

A sample of 186 noncompletions were drawn from the correspondence study files of the University of Wisconsin and the dropouts interviewed to ascertain the possible factors for noncompletion of correspondence courses. Among adults, the significant factors were found to be: 1) whether their life was settled or unsettled; 2) change in career plans; 3) family illness or death; 4) lack of goal clarity in the correspondence courses; 5) the strength of the student's motivation; and 6) the lack of understanding of the self discipline required. Additional factors among high school students taking correspondence courses were: 1) the correspondence enrollment policy of the high school; 2) the supervision provided by the high school; and 3) the manner in which the courses are financed. The significance of the course varies with the student. These tentatively identified factors in noncompletion need to be further studied.

81. Larson, Arthur. A STUDY OF THE RELATIVE ABILITY AND ACHIEVEMENT OF CLASS EXTENSION, CORRESPONDENCE AND RESIDENT STUDENTS AT THE UNIVERSITY OF KENTUCKY. University of Kentucky (Lexington). M.A. Thesis. 1929.

A comparative analysis of the relative ability and achievement of extension, correspondence, and resident students at the University of Kentucky based on data secured by means of questionnaires sent to instructors and students and the administration of reading and vocabulary tests to a sample from each student group revealed that: 1) extension and correspondence students compare favorably with residence students in ability to do college work as shown by the scores on reading and vocabulary tests and estimate of the faculty. The most notable difference occurs in the variability of the two groups - the non-resident classes having more high and low scores although the mean and median are nearly the same; and 2) extension and correspondence students compare favorably with resident students and secure about the same or higher grades. In addition they spend more time in subject preparation than do residence students. Appendices include the questionnaires and tests employed.

82. Larson, Emil L. THE COMPARATIVE QUALITY OF WORK DONE BY STUDENTS IN RESIDENCE AND IN CORRESPONDENCE WORK. Journal of Educational Research v25,p105-109. February 1936.

A comparison of the grades of 56 University of Arizona students who had taken both residence work and correspondence courses revealed that the grades earned in correspondence study tended to be slightly higher than those earned by the same students in courses in residence. Several explanations are possible for this: 1) correspondence study may indicate more favorable choices of courses on the basis of interest and individual aptitude; 2) there may be a difference in the standards of grading correspondence and residence courses although random examination from the Arizona sample did not so indicate; 3) correspondence study may represent superior work on the part of the students, subjective evidence suggesting that many correspondence courses are so planned and constructed that they challenge and develop the student's best efforts; and 4) failures and near failures may not be recorded in correspondence courses. Scientific procedures in the form of objective tests or rotating groups must be employed as a basis for securing valid data.

83. McDowell, James. AN EXPERIMENTAL STUDY OF THE EFFECT OF SUPERVISED CORRESPONDENCE LESSONS ON ACHIEVEMENT IN ACADEMIC SUBJECTS. University of Michigan. M.A. Thesis. 1940.

A comparison of the marks of a paired sample of pupils studying supervised correspondence courses with their academic marks and with marks of matched pupils taking only the residential courses was undertaken for the purpose of ascertaining the effect on performance in residential courses of taking correspondence work. The performance of the two sets of students was studied over the time interval of a semester and the effects of correspondence work was shown through the gains and losses in

grade point average in the residential subjects. The study indicates that the achievement of the students varied inappreciably. However the marks received by the correspondence students in their correspondence courses were approximately one letter grade higher than in the regular courses. Among the conclusions were: 1) there was little evidence suggesting that correspondence study materially assisted motivation or performance in the regular courses; 2) efficiency in the regular courses was not impaired except in Social Science; and 3) pupils engaging in correspondence work did not neglect their regular subjects. Seven tables of data are included.

84. Pfeiffer, J. William; Sabers Darrell. ATTRITION AND ACHIEVEMENT IN CORRESPONDENCE STUDY. National Home Study Council News. February 1970 Supplement.

The article deals with the problem of [illegible]y many students enrolling in correspondence study do not complete [illegible] course. In the one-semester-hour courses nearly 13% of students did not submit even one lesson. The figures for the two-and three-hour courses were both over 20%. In the four-hour courses, nearly 32% do not submit the first lesson. A student in a one-hour course whosubmitted one lesson had an 85% chance of completing the course. Of students in two-and three-hour courses who submitted one lesson, over 70% went on to complete the course. Grade point averages (GPA) were not related to length of time taken to complete the course. The highest GPA s were earned by those who completed in one month; the next highest were earned by those who took over two years to complete the course. However, since this latter group comprised 13 students, no significance can be attributed to the finding.

85. Schwin, Mary Lowell. ANALYSIS OF CORRESPONDENCE COURSE GRADES IN THE UNIVERSITY OF COLORADO. University of Colorado. M.S. Thesis. August 1929.

A survey was made of correspondence courses taken by students in the University of Colorado, using data secured from Registration Forms and Correspondence Instruction Records (copies of which are included in the appendix) which was statistically analyzed, revealed that: 1) more boys than girls register for correspondence work; 2) completion rate is 50%; 3) average completion time was 8 -1/2 months; 4) majority of courses registered for are 3 credit hours; 5) correspondence students usually take Freshmen and Sophomore courses; 6) only a few students are employed; 7) most students have taken previous work at the University of Colorado; 8) the average grade made in correspondence courses is higher than the average grade made in all university courses; 9) most popular subject area is education; and 10)the most popular course is English. 11 tables of statistical data are included.

86. Sims, Ripley, Comp. RESEARCH IN THE CORRESPONDENCE INSTRUCTION FIELD. United States Armed Forces Institute, Madison, Wisconsin. 21p. 1965.

This report is a summary of selected current research in the correspondence instruction field prepared for the 1965 meeting of the International Council on Correspondence Education. The areas covered include: 1) acceptance of correspondence credits for degrees; 2) classroom and correspondence instruction comparisons; 3) correspondence student characteristics; 4) course improvement; 5)dropouts; 6) effectiveness of replies to inquiries about correspondence study; 7) evaluation of correspondence instruction; 8) completion studies, 9) instructional TV; 10) methods of teaching in Braille; 11) organization and administration of programs; and 12) programed instruction.

87. Sloan, Denver. SURVEY STUDY OF CORRESPONDENCE DROPOUTS AND CANCELLATIONS; CORRESPONDENCE STUDY PROGRAM. University of Kentucky. December 1965. 15p.

88. Spencer, Oscar. FACTORS ASSOCIATED WITH PERSONS WHO COMPLETE CORRESPONDENCE COURSES. Home Study Review v5 n4 p10-24. Winter 1964-1965.

89. Wilson, Robert Roy. THE EFFECTS OF SELECTED PROGRAMMING-ANALOG TECHNIQUES AND VOICE CONTACT ON COMPLETION BEHAVIOR IN CORRESPONDENCE EDUCATION. University of Michigan, Ph. D. Thesis. 1968. Available from University Microfilms (Order No. 69-2409, MF $3.00, Xerography $8.80). Ph.D. Thesis. 195p. 1968.

This study tested the effect, on completion behavior in correspondence study, of substituting certain analog techniques for traditional correspondence procedures. Eight lessons of a psychology correspondence course were used. A pretest, posttest, personal questionnaire, and post course attitude questionnaire were administered. Experimental procedures and materials involved mailing lessons each week instead of all at once; providing immediate feedback by answer guides with each lesson; encouraging review by partially cued self-tests; providing voice contact between instructors and students through biweekly telephone conferences; and requiring participation in How to Study materials. Fifty adults, assigned to a control group (c) or one of two experimental groups (E-1 and E-2) were the subjects. E group lessons were graded but not returned; and only the E-2 group received telephone feedback. The major finding was that, in terms of numbers of students submitting Lesson One, their completion rate, time required for completion, and the number completing all lessons and the examinations, the performance of the E groups was significantly better than that of C subjects.

90. Ziegel, William Henry. THE RELATION OF EXTRA-MURAL STUDY TO RESIDENCE ENROLLMENT AND SCHOLASTIC STANDING. George Peabody College for Teachers (Nashville, Tenn.), Ph. D. Thesis. 1924.

Using a population sample of 5 state teachers colleges in Missouri and Illinois and employing statistical techniques, a study was made of the relation of extra-mural (extension, correspondence) study to residence enrollment and scholastic standing. Among the findings were: 1) extra-mural study does not increase residence enrollment appreciably. Most extra-mural students started with residence work. Correspondence and extension enrollments are strongly associated; 2) students who had both residence and extra-mural study make higher grades in residence than those with residence work only, higher grades in extension than those with extension only, and higher grades in correspondence than those with correspondence only; 3) when the types of study are compared, grades are lowest in residence study, medium in extension study, and highest in correspondence study; 4) variability in grades is least in residence study, medium in extension, and highest in correspondence study; 5)age and advancement are significantly correlated with grades. Correlation is greatest for residence, medium for extension, and lowest for correspondence; 6) health and number of courses is positively correlated in residence work and negatively correlated in extra-mural work; and 7) mental ability and residence grades are strongly correlated, and the correlation increases sharply as we go from the residence-extra-mural group, through residence only, to the entering freshmen.

SECTION IV: TRENDS OF THE PAST DECADE

During the last fifteen years there has been a burst of development in correspondence study itself and in the larger emerging field of independent study, involving not only the use of new instructional technologies but new programming areas and learning structures as well. Specifically, new horizons are emerging in the direction of 1) increasing use of programmed instruction and computer assisted instruction in correspondence study, 2) the use of mass or audio-visual media in correspondence study, 3) the development of special degree programs for adults, many of which employ correspondence instruction, 4) the emergence of the concept of degree or certification by examination which opens out new potential areas for correspondence study, and 5) the rise of new learning systems which incorporate many instructional techniques, including correspondence study, within a larger system or mixed media approach with new supporting institutional structures, as in some European countries.

Since the purpose of this report is to summarize correspondence research and development literature from the past (roughly up to 1960), most of which is inaccessible in its original form, I can only introduce these new trends briefly, appending references to some of the reports in which these developments can be more thoroughly explored. Included are a few references to the basic works in programmed instruction and other areas which now are salient in correspondence instruction.

Fortunately, in part because of the work of ERIC, most of these reports are much more easily available, many of them in inexpensive microfiche and hard-copy form from the ERIC Document Reproduction Center. Please read carefully the note on "availability of documents" at the end of this book.

A. Programmed Instruction In Correspondence Instruction

Perhaps the instructional technology which has attracted the most attention (and the most claims of being a panacea) in recent years is programmed learning which has its roots in B. F. Skinner's "operant conditioning" studies, in the use of "simulators" in military training, and in the educational testing movement. Kempfer notes three factors that have led correspondence schools toward the use of this method: (a) the cost of heavy instructional load encouraged correspondence schools to seek shorter responses; (b) the development of objective testing and recognition of the value of specific learning objectives opened the way to greater use of objective items; and (c) the general recognition of a major weakness of correspondence study - the delayed confirmation of student response (103:2-3).

Schramm defines programmed instruction as "a learning system where a 'program' takes tne place of a tutor for the student, and leads him through a set of specified behaviors designed and sequenced to make it probable that he will behave in a given desired way in the future - in other words that he will learn what the program is designed to teach him." Sometimes the program is housed in a 'teaching machine' or in a 'programmed textbook.' The program is the essential thing in programmed learning and its components are seen as:

(a) an ordered sequence of stimulus items

(b) to each of which a student responds in some specified way

(c) his responses being reinforced by immediate knowledge of results

(d) so that he moves by small steps

(e) therefore making few errors and practicing mostly correct responses

(f) from what he knows, by a process of successively closer approximation, toward what he is supposed to learn from the program (134:2-3)

The most commonly held view of programmed learning is the model based on B.F. Skinner's work. A program is a sequence of small steps of instructional material (frames) most of which require a response to be made by completing a blank space in a sentence. To ensure that the expected responses are given, a system of cueing is applied, and each response is verified by immediate knowledge of the results. Such a sequence is intended to be worked out at the learner's own pace as individual self-instruction but this concept has largely been replaced by group or team work on programmed tasks as this method has been shown to be advantageous. In addition the idea of programs as substitutes for live teachers has also been largely abandoned (130:45,48).

A rival to the Skinnerian model has been the branching technique, in which a larger amount of material is presented and followed up by a problem for which alternative answers are provided. Should inappropriate responses be made, the error is 'remedied' in a branch or loop which rehearses the point in order to overcome the mistakes or misunderstandings. However, this technique has failed to hold the field not merely because selecting an alternative is only one of many learning processes needed but also because the idea of remedial instruction through optional branches may itself be questioned since the more branches a student takes the lower his test scores tend to be, while removal of remedial loops in experimental research seems not to lessen the amount learned (130:45, 48).

Schramm, in his general evaluation of programmed instruction notes that:

1) Although the research gives us little reason to be satisfied with the theories and the standards of today's programming, and every reason to believe that it will be possible

some day to make programs vastly more effective than today's programs, nevertheless programmed instruction shows signs of hardening, partly under commercial pressure, into a fixed and mechanical technology, with theories and procedures taken for granted.

2) Although programmed instruction has within it the potential to turn the attention of education and educational research more intensively and productively than ever before to the processes by which humans learn, there is very little sign that it is being used productively to test theories of human learning or theories of cognitive process, or to enlighten the teacher concerning the process by which she teaches.

3) Although programmed instruction is essentially a revolutionary device, in that it has the potential to help free man from some of his bondage - the waste of human resources where there are no teachers or where people cannot go to school; the waste of time and talent where all students are locked into the same pace and all teachers into the same routine; the tyranny of tradition which permits the study of a certain topic to begin only at a certain age, and expects a student to accomplish only so much as a questionable test of his ability says he can do; and the inadequacy of outmoded and inadequate curricula - despite this, programmed instruction is very slow to rise to such a revolutionary potential (134:37-40).

The literature on programmed instruction is voluminous and growing more so every day, but little of it directly relates to correspondence study. The following items in the bibliography are on general topics of programmed instruction: 97,104,111,112,114,115,125,126, 133,134,146,147.

Literature dealing directly with the use of programmed learning in correspondence study is relatively sparse but the experimentation to date does not show any outstanding advantage in the use of this method. In reviewing the research done at the University of Nebraska, International Correspondence Schools, Cleveland Institute of Electronics, DeVry Technical Institute, Marine Corps Extension School, and the Federal Aviation Agency, Kempfer found there is no conclusive evidence to indicate improvement in performance of students using this method in correspondence study (105:8).

Douglas D. Sjogren, seeking to discover the impact of linear programming methods on achievement, mean course completion time, and completion rates in high school correspondence instruction, found that: 1) with respect to achievement in the cognitive domain, programmed instruction was on a par with more traditional correspondence instruction methods; 2) it reduced the amount of time needed to complete the course; 3)but it did not significantly change the completion rate. The chief advantage in the technique was its efficiency in the handling and administration of learning materials (137:4-15).

Jack Friedman surveyed correspondence student attitudes toward programmed instruction and found that while programmed materials were much easier to work with, there was no evidence that students pursuing the programmed material did significantly better than with more traditional correspondence instruction materials (102:11-14).

Leonard Stein, cautioning against an educational rush to programmed learning, suggests that their limitations be kept in mind because: 1) we don't really know what learning is; 2) programming is not a new technique of teaching-learning, so educators ought not be uncritically attracted to the glamorous hardware; 3) programming as now practiced is not necessarily an effective device for correspondence because of its closed system nature; 4) some students, especially the more able ones, find it dull; and 5) the cost of programmed materials is quite high and it has not yet been demonstrated to be worth the cost of production (140:56-60).

Several other cautions might be raised. The technique may be useful in communicating facts and teaching specific behaviors, but can it be used to teach students to think or create, especially if we don't fully understand what learning is? Value problems may also be present, for the "objectivity" of the program may more easily than traditional methods hide axiological biases inherent in the materials programmed. It is probably more useful to regard the techniques as an addition to the array of methods in a larger mixed learning system. There it has appropriate uses within the framework of such a system.

Similarly the Report of the Conference on Newer Media in Correspondence Study expresses caution with regard to the rush to programmed instruction.

We believe that:

1. The programmed learning concepts are admirably suited to meet some of the fundamental problems of correspondence study and will ultimately make a significant contribution to correspondence teaching.

2. Programmed learning must be used when an analysis of the teaching problem reveals that the programmed learning method will make the most efficient and effective contribution to teaching.

3. Programmed learning is to be regarded as a process in which concept formation is to be achieved through a rigorous ordering of relevant information which is symbolically expressed through the sensory media which make possible the most effective learning response.

We propose that:

1. Since valid research thus far completed seems to lend support to the validity of programmed learning as a teaching medium, the newness of this medium in regard to correspondence teaching will require these specific research objectives; research leading to the creation of specific kinds of programs, effective principles of utilization, and the comparing of the success of the programmed learning design to the success achieved through the use of procedure now current.

We suggest that:

1. First hand information be secured regarding principles, practices, research, and existing programmed study material.

2. Campus personnel be informed and involved in participation in an information and study program leading to ultimate decisions regarding the utilization of programmed learning methods.

3. The officers of the correspondence study and audio-visual divisions of the National University Extension Association continue to stimulate interest in programmed learning and provide inter- and intra-organizational communication to the end that the unique contribution which programmed learning can make to correspondence teaching will be realized. (129:85).

B. New Media in Correspondence Study

The use of newer media (other than programmed instruction) has also been growing in correspondence study, usually in connection with programs influenced by the "systems approach" to education. While much has been talked about with regard to this development there remains only a small number of substantial bibliographical items in this area. We might point to two different directions now being explored: 1) the use of broadcast, projected, audio, graphic, and manipulated media in correspondence study. The use of broadcasting techniques (especially radio) was of course pioneered by W. H. Lighty at the University of Wisconsin in the 1920s and used more recently in the Nottingham University (England) experiments in educational television (1966-1968) which led in part to the formation of the Open University (for a lengthier comment, see the section on recent developments overseas); and 2) group correspondence study wherein students located in the same geographical locale meet, with a teacher periodically sent out from the correspondence institution, or, alternatively meet at the correspondence institution itself for seminars.

One of the more comprehensive documents on the use of the newer media in correspondence study is The Report of the Conference on New Media in Correspondence Study (4-8 February 1962, University of Texas) which contains some suggested guidelines for the use of these new techniques.

Broadcast Media

We believe that:

1. Broadcast media and correspondence study, in judicious combination, can bring individualized instruction to a mass audience.

2. Broadcast media offer to correspondence study not only the intrinsic advantages of sight and sound, but they also provide an additional measure of pacing discipline, and motivation.

3. Correspondence study offers to broadcast media an opportunity to provide for individual differences, an avenue for two-way communication between student and teacher, a means for direction of a total learning experience and a procedure for student reaction.

4. The combination of broadcast media and correspondence study should not be a mere coupling of two methods of teaching, but through experimental development and integration should result in a completely new instructional procedure.

We propose that:

1. Reconsideration be given to the 1959 research proposal of the Committee on Radio and Television of the Division of Correspordence Study on "The Function of Two-Way Communication in Learning."

2. A research study be designed which will determine the contributions of selected resource materials such as graphics, slides, filmstrips, and programmed instruction, when used by the student in conjunction with television correspondence study.

3. A research study be designed which will determine the contributions of selected resources materials, such as graphics, slides, filmstrips, and programmed instruction, when used by the student in conjunction with radio and correspondence study.

4. A research study be designed which will compare the relative effectiveness of combining correspondence study with radio and with television in teaching the same course.

5. A research study be designed which will determine the optimum frequency and duration of broadcast and optimum frequency and type of correspondence student respose desirable in this combined method of teaching.

6. A research study be designed in which broadcast media and correspondence study are employed as a single vehicle for continuing study on the part of the participant in short courses, conferences, and workshops.

Projected Media

We recommend that:

1. Effort should be made to provide for the use of projected media when such use will secure better results than any other method.

2. Correspondence study directors should explore the potentialities of such devices and materials as 3-dimensional projected materials, 8 mm. films, viewers, projectors,etc.

3. One criterion for the selection of projected material should be the appropriateness of non-verbal response. Research should be considered to compare verbal and non-verbal responses.

4. One criterion for the selection of projected materials should be the presence of a specific teaching purpose, such as motivation, conceptualization, the transformational process, etc. Production should be based on the recognition of the peculiar capabilities of various projected media with respect to a specific teaching purpose.

5. One criterion for the selection of projected materials should be the availability to the student of the required equipment.

We suggest that:

1. Projected materials be produced which are easily adaptable to presentation in foreign languages, since correspondence study often deals with foreign students. Materials produced should center on principles rather than applications.

2. An on-going project should be undertaken to provide lists and catalogs of materials for both audio-visual and correspondence study personnel. These materials should be in a form easily excerpted for presentation to a teacher who is preparing a course in correspondence study and for presentation to students who live in areas where there is a high availability of materials and equipment.

3. An on-going project should be maintained to provide equipment designers and suppliers with information concerning the special needs for correspondence study.

4. Correspondence study directors should make surveys to locate equipment available and appropriate for use in correspondence study. A national compilation should be arranged and kept up to date.

Audio Media

We recommend that:

1. A correspondence study recordings library be established which would consist of recordings in various subject areas by outstanding teachers from various universities. Duplications could be made from this library for distribution to correspondence school students.

2. Sound recordings be developed to accompany new projected aids.

3. A project be initiated to determine the feasibility of including sound recordings along with the printed word in all areas of correspondence study.

4. A project be initiated to undertake the development of types of audio equipment that may be of particular use in correspondence study. For example, a small size, low cost, battery operated, transistorized recording and playback device might be developed to provide two-way communication between instructor and student.

Graphics and Manipulated Media

We recommend that:

1. Each institution use whatever means it has for producing attractive high quality course manuals or course syllabi. In addition, we believe that there should be an effort to use other graphic materials which are available from national and local sources.

2. A survey of correspondence bureaus be conducted to discover the courses in which manipulated media and graphics are currently being used, a brief description of the material, the source, the cost, and if the material has been produced locally, its availability to other institutions.

3. Use be made of the Educational Media Council Directory and a supplement be prepared if this seems desirable. This supplement might include sources of such illustrative material as pictures, maps, charts, and art reprints from such periodicals as Life, Ideals, and National Geographic. These sources might also include textbook or encyclopedia materials such as overlays of human circulatory systems, diagrams of atomic reactors, frog anatomy, etc., which appear in some current publications. Only material available from publishers would be reported, along with approximate cost.

4. Any seminars or in-service meetings for course writers should include displays and explanations of graphic materials with suggestions for their incorporation.

5. The course writer should be encouraged to develop the creativity of the student by providing opportunities for the student to summarize and apply information through forms other than the written word. (129:83-85).

Another direction of development in methodology is experimentation with group correspondence study. The best treatment I have found of this direction is that of Wedemeyer and Childs in their volume New Perspectives in University Correspondence Study which devotes a chapter to this topic (157). Group correspondence study can be crudely defined as the method by which students in a given geographic region meet as a group periodically in that area, or alternately where correspondence students meet periodically as a group at the institution offering the correspondence courses.

The method, designed for small groups of from 6-15 persons, has great flexibility. It can be fairly formal, serving a group, only one of whose members is a registered student. Wedemeyer and Childs note some advantages aside from its economy:"1) It is a satisfactory method of providing guidance and instruction to both formal groups; 2) It combines discussion and group experiences as well as opportunities for individual learning; 3) It develops leadership abilities in participants; 4) It places emphasis on individual preparation and study as prelude to group experience and discussion; 5) It takes pressure off of campus instructors and leads to the development of off-campus group leaders who are competent to instruct within the group study framework while working from a correspondence guide." (157:31)

Wedemeyer and Childs also point to several problems to be overcome before the method can be perfected: 1) The success of the group seems to be closely related to the kind of leadership in it; 2) There appears to be the need for training or orientation for group leaders to improve both leadership and group discipline; 3) The kind of syllabus or study guide best suited to group study programs should be investigated; and 4) How to "field" small group study courses, when the general procedure has been to "field" (i.e. recruit and register) from a central office.

The spread of experimentation with the small group concept has led to the modification of the idea into at least three "plans" which characterize most group correspondence today.

1. Informal Group Study. With this plan, the group itself organizes and conducts its own sessions. Members may submit individual assignments, or one set of assignments may be submitted for the entire group by a secretary or recorder. The responsibility for the writing of the assignments for the group may be rotated among the members. Where one set of assignments is sent in for all members, it is prepared after full group discussion. When the assignments are returned, the group discusses the corrections, additions,suggestions, and comments of the instructor. Size of group recommended: 6-12.

2. Informal Group Study with Visits by the Instructor. This plan is similar to that described above, except that the instructor who reads the assignments also meets with the group occasionally to guide its thinking, motivate further study, and assist the members in achieving the group's objectives. Size of group recommended: 6-12.

3. Directed Group Study. In this plan, the entire course is under the direction of the instructor who acts as a leader and meets with the group at regular intervals throughout the course. Between such meetings the group usually meets by itself for discussion, laboratory, or workshop activities. All members of the group participate in discussion and other activities, but prepare individual assignments. Since each individual in a directed study group submits his own assignments and takes the final examination, credit may be earned. Size of group recommended: 6-12. (157:33-34)

Although Wedemeyer and Childs felt that the greatest potential for the small group method was in adult liberal education programs on a noncredit basis, new programs have already headed in other directions. A case in point is the Bachelor of Liberal Studies program at University College of Syracuse University and other "special" degree programs. This program combines the correspondence study method with three residential seminar periods in a fully credited degree program.

More references on the general topic of new media other than programmed instruction are located in the chapter bibliography. (See items: 91, 97,102, 103, 104, 105, 108, 111, 112, 114, 115, 119, 121, 125, 126, 127, 128, 129, 130,131,133,134,135,136,137,139,145,146,147,148,149,150,152,153,154,155).

C. Special Degree Programs for Adults

In the last ten years there has emerged a movement toward the establishment of special degree programs for adults, some of which employ the correspondence study method, and all of which, in one form or another, embrace the concept of independent study.

This development germinated from experimentation at Brooklyn College, was stimulated by the Center for the Study of Liberal Education for Adults over a ten year period and assisted by grants from the Carnegie Corporation. Experiments, most of them highly successful, have ranged from relatively simple modifications of the mechanical requirements for the degree up to the invention of entirely new curricula especially suited to mature adult students, in programs where correspondence and other independent tutorial methods combined with short-term residential sessions have entirely eliminated the need for protracted presence on a university campus.

The pioneer programs were centered on liberal studies degrees of Associate or Bachelor length. Chief developments in a movement which has rapidly spread include: 1) extension to Master's level programs; 2) introduction of similar programs in occupational and professional subjects; 3) elaboration of methods, selection and counseling procedures, and ways of organizing and delivering the programs.

Reinforced by the growing acceptance of credit and degrees by examination,the "special" degree experimentation has emerged as one of the most promising movements in American higher education.

Fortunately, most of the documents describing these programs, largely CSLEA publications are still available.(Relevant items in the bibliography are: 93,94, 107,109,116,141,142,143,144,156,158,160).

D. Credit Through Examination, and Degree by Examination

A more recent development has been the growing acceptance of the concept of both credit through examination and now degree by examination, especially in the light of the findings of the Carnegie Commission on Higher Education (1970). One of the initial impulses in this direction came, as in the case of special adult degree programs, from the work of the Center for the Study of Liberal Education for Adults but did not gain momentum until the establishment of a degree by examination program by New York State, and increasing publicity in this country about the Open University in Great Britain.

A statewide system of home study in New York was first proposed in 1966, and the following year the College Proficiency Examination Program was established. Under the CPE program, a student may obtain college credit through profiency examinations offered through the State Education Department. So successful has this program been in meeting educational needs, especially in light of the increasing costs of higher education, that the State Board of Regents is now rapidly moving toward granting degrees by examination. Alaska announced an analagous program in late 1970 and the State of Washington appears also to be moving in that direction. (Items in the bibliography on this subject are: 106,109,110,116,117,118,156).

E. New Developments in Europe

While special adult programs and programs of degree by examination in the United States are only now beginning to attract the attention they deserve, developments in Europe are one step ahead, since educators there seem less reluctant to exploit unorthodox or experimental procedures. The Council for Cultural Cooperation of the Council of Europe, surveying the new mixed media educational systems that have sprung forth in the last two decades, points out that the appropriate use of the new instructional technology requires that 1) its elements are seen as simply different aspects of one educational process, and 2) its organization and control (including evaluation) are centralized thus allowing regular monitoring of the work done by students and tutors, and rapid feedback of this into broadcast programming, correspondence courses and all other elements in the system (117).

Two outstanding examples of what is happening in Europe are the "open University" in Great Britain, and the mixed public-private "cooperative" educational system in Sweden.

The Open University, which loosely fits the model of a nationally sponsored mixed media learning system outside of the traditional educational institutions, emerged in part from the educational broadcast media experiments conducted by the University of Nottingham and the National Extension College, and from the University of Manchester sponsored studies of the feasibility of correspondence study for degree by examination studies (117). This new learning system, granted a Royal Charter in May 1969, has degree granting authority and employs a coordinated mixture of instructional techniques including (a) television and radio programming ; (b) correspondence and home study programs and kits; (c) face-to-face meetings with other students and with tutors in specially provided local study centers; and (d) short residential courses. By August 1970, 42,000 persons had applied for a projected 1971 enrollment of 25,000. Indeed, such has been the response, that the Open University is considering expanding its enrollment to 50,000 in the near future. Central to the learning system are 250 local study centers equipped with broadcast receiving equipment, audio-visual media, and tape libraries which embrace an expanded conception of group correspondence study and supervised correspondence study for adults (92:8-10).

Sweden offers another model - the cooperative integration of the resources of both the public and private educational groups into the total national educational system. This was possible because of an already widespread collaboration between the correspondence institutions (e.g. Hermods-NKI, Brevskolan) and other educational groups, which has taken several forms: cooperation with individual enterprises to meet their training needs;cooperation with the regular school system by providing supervised correspondence instruction and self-instructional material; cooperation with adult education

associations, trade unions, and labor market organs; cooperation with governmental bodies such as the upper secondary schools for adults and prisons. The Education Reform Law of 1968 consolidates this interlocking cooperative system by supplying more public funds, and placing emphasis on newer instructional technology such as the broadcast media (100).

Other recent volumes document the trend toward the creation of mixed media learning systems. Among them are the following items in the chapter bibliography: 117,138,148,149,150,151,158,159,161.

F. Epilogue

In view of the material reviewed in this volume, it seems clear that correspondence study, despite its limitations and problems, has contributed greatly to meeting educational needs not met by the more traditional institutions, and in doing so has generated several directions of innovation in the whole of education. Wedemeyer notes that "Correspondence education more than any other methods, has pioneered in two important lines -- 1) in proving that learning does not have to conform to the place-time limitations imposed by teachers and institutions, and 2) in making opportunity to learn available by self-selection, not by institutional, economical, geographical, or class determinants. Yet correspondence education is not wholly accepted today; nor has it given proper attention to modern technology and a basic theory of learning by correspondence (159:3)."

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